The Dissertation Committee for Melissa Christine Warak

certifies that this is the approved version of the following dissertation:

MADE TO MUSIC: INTERACTIONS OF MUSIC AND ART, 1955-1969

Committee:

Linda Dalrymple Henderson, Supervisor

John R. Clarke

Richard Shiff

Louis A. Waldman

Robert H. Abzug

MADE TO MUSIC: INTERACTIONS OF MUSIC AND ART, 1955-1969

By

Melissa Christine Warak, B.A.; M.A.

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MADE TO MUSIC: INTERACTIONS OF MUSIC AND ART, 1955-1969

Melissa Christine Warak, Ph.D.

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Supervisor: Linda D. Henderson

This dissertation examines the methods by which postwar American and European visual artists engaged with aspects of music in their work. Focusing on four case studies spanning from 1955 to 1969, I look to artistic interest in composition, musicianship, music theory, and sensory experience. These artists are tied culturally through their communities, performances, and exhibition histories; I further show how their mutual interests in Eastern mysticism and poetry forge an even more profound connection among them, and this dissertation offers an alternate cultural history for understanding modes of postwar abstraction in the United States.

Chapter one explores the early conceptual art of American Minimalist composer and Fluxus performance artist La Monte Young. Young's two series of typeset event scores from 1960-1961 opened up the arena of musical performance to non-musicians and visual artists. This chapter positions Young as an interlocutor between the worlds of avant-garde music and art in exploring a cultural history of the event scores, their adaptations, and Young's role in the discourse on intermedia.

Chapter two looks at the musical systems and styles that served as stimuli for two abstractionists, Larry Poons and Leo Valledor. Whereas Poons used a quasi-musical and mathematical system in composing his dot paintings, Valledor improvised upon the qualities of the jazz music he most admired through color experimentation.

Chapter three provides an analysis of the eight volumes of the German music periodical *Die Reihe*, a close look at the composition techniques of *Die Reihe*'s co-editor Karlheinz Stockhausen, and the response to these ideas within the early serial sculpture of Sol LeWitt. *Die Reihe*, a journal of postwar serial music, was an important source for American artists in the 1960s, but has been little studied. This chapter offers an alternative reading of LeWitt's projects in terms of new music theories.

The last chapter considers the sound sculpture of Greek kinetic artist Vassilakis Takis. In his efforts to capture the "music of the spheres," Takis's sound-producing sculpture combined his interests in Zen Buddhism, physics, magnetics, and sound waves through the use of various metals and magnets.

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Introduction

"The effect of music is so very much more powerful and penetrating than is that of the other arts, for these others speak only of the shadow, but music of the essence."
-Arthur Schopenhauer, from *Die Welt als Wille und Vorstellung (The World as Will and Representation)*, 1819

Made to Music: Interactions of Music and Art, 1955-1969

The event is a 1960 Contre-Festival performance at Mary Bauermeister's performance atelier in Cologne. In a photo by Manfred Leve, one of the primary documentarians of early performance art in Germany, Nam June Paik and David Tudor perform composer La Monte Young's *Poem for Chairs, Tables, Benches, etc. (or other sound sources)*, which Young had written only a few months prior (Figure 0.1). In the center of the photo in a pitched attic room, Tudor stands in profile, wearing glasses, a jacket, a white shirt, and presumably, a necktie; he faces a chalkboard inscribed at the top with the word "POEM" chalked in crude capital letters. His right arm crosses his left toward a bottle of chianti propped up next to the chalkboard. To his left, Paik, also wearing a dark jacket, looks toward the activities of Tudor's hands. In the foreground, three out-of-focus heads tilt toward the left, indicating only two or three feet of distance between the musicians and audience. In the pages-long text score for *Poem*, Young had written,

> Etc. in the title means anything that can be dragged across the floor. The chairs, etc. are to be pushed and dragged around on the floor, fast or slow, loud or soft, taking up much or little space, upside down or on the sides or right side up. The sounds may also move in and out of the room and travel long distances away

> (up and down halls, etc.). Most of the touch necessary to produce the sounds is to be left up to the performers or the director.[1]

The record of this particular performance remains unclear, just as do the roles of music, the visual, and text, although one may think of this event as encompassing all three. It exists ephemerally as a photograph of a performance of a musical work interpreted from a nearly fifteen-hundred word score distilled as a single word of text: POEM. Preemptively addressing the issue of the confusion of the media for this work, Young wrote in a letter to Tudor in anticipation of two concerts of his score:

> I called it: Poem, a Chamber Opera in one act on the programs we did here cause the people only wanted MUSIC on their programs. You can use that title or you can just call it Poem (I like that best) and then if somebody asks what it was you can say "an event" or something. Or it could be called Poem, an Event or Poem, a theater piece, whatever seems best to you.[2]

This photo thus encapsulates questions of intermediality, interdisciplinarity, and intertextuality in an unprecedented manner.

As a counterpoint to the nagging concern of the comingling of the arts, in 1963, amid press accusations that his musical performance art did not actually produce music, artist Nam June Paik responded with the following statement from his *Postmusic Manifesto*: "Why is it music? Because it is not 'not music.' How can I define 'What is not music' when no one in the world can define 'What is music'?"[3] This statement summarizes many artists' concern with creating visual expressions of sound in the 1950s and 1960s. Paik's friend, composer John Cage, liked to repeat the dictum to "let sounds be themselves," thus opening up the possibilities for music to include any sound, noise,

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[1] David Tudor Papers, Getty Research Institute. Box 14, Folder 4.
[2] *Ibid*., Box 14, Folder 4.
[3] John G. Hanhardt, *The Worlds of Nam June Paik* (New York: Guggenheim Museum, 2003), 55.

or even silence. This dissertation explores the ways in which these possibilities were expressed during the period of 1955 to 1969 via a series of case studies of the relationship between music and art.

The histories of music and art of New York in the 1960s are vast and various and, at times, exclusive of each other. Yet, examinations of underground artistic activity reveal a depth to the interconnectedness of sound and the arts in this period. Many histories of the underground tend to explore the culture with sharply focused one-sidedness, as if artists, musicians, composers, writers, dancers, and actors living in Greenwich Village, the Lower East Side, or downtown New York City lived in isolation with their craft and didn't venture out of their studios or out of the city (or above 14th Street, for that matter). Other historians make cursory mentions of artists' musical interest—that Bruce Nauman listened to contemporary experimental composition, that Andy Warhol steeped himself in pop music, or that *everyone* knew John Cage—without exploring the cultural ramifications of such interests. Can we really believe that artists had only perfunctory interaction with music? Indeed, not. I argue that the interaction of music and sound, which were sometimes indistinguishable, played a crucial role in the development of the trans-Atlantic avant-garde community in the late fifties and early sixties. To segregate sound from the development of the plastic arts is to remove of one of the most experimental and important media for visual artists in this era.

Outline of the Dissertation Project

My study of the sibling disciplines of art and music examines the methods by which American artists, as well as international artists working in the United States, engaged with or responded to aspects of music in their work. I look to their interests in composition, musicianship, music theory, systems, and sensory experience to explore different ways that artists can evoke sound visually. Although these artists are tied culturally through their communities, performances, and exhibition histories, I further connect them through their mutual interests in both poetry and Eastern metaphysical philosophy in order to provide an alternate cultural history for understanding modes of postwar abstraction in the United States. My overarching goal, then, is to provide new insight into visual projects that use musical models while engaging with modes of abstraction rather than representational figuration; in this way, I wish to take the study of music and art beyond musical motifs presented visually. In other words, I argue that the immateriality and sensorial qualities of music lend themselves more conceptually to visual abstraction than to representation.

The first chapter explores the early conceptual art of American Minimalist composer and performance artist La Monte Young. A former student of Karlheinz Stockhausen, Young is best known for composing music in sustained tones while also incorporating Hindustani music into his oeuvre. As a composition student at Berkeley in the late 1950s, Young had become disillusioned with what he viewed as stifling elitism in musical academia. As a response, he created two series of typeset event scores or "conceptual compositions" in 1960 and 1961. These opened up the arena of musical performance to both trained musicians as well as to non-musicians, and often, to visual artists. Several of Young's event scores became mainstays of Fluxus performance. One

example is his *Composition 1960 #10 to Bob Morris*, which was performed several times by Nam June Paik as *Zen for Head*, a meditative and mostly visual action (Figures 1.1 and 1.11). This chapter positions Young as an interlocutor between the worlds of avant-garde music and art and explores a cultural history of the event scores, their adaptations, their performances, and Young's role in the discourse on what was termed intermedia.

Chapter two looks at musical systems analogous to the modes of painting for two abstractionists, Larry Poons and Leo Valledor. While Poons used a quasi-musical and mathematical system in composing his dot paintings, Valledor improvised upon the qualities of the music he most admired through color experimentation. Poons had been a composer and musician before turning to painting, and I argue that his musical training and interactions with the New York music scene inform the content and reception of the dot paintings. As one example, the prefatory drawings made in advance of each painting demonstrate a relationship to the musical systems of scoring and notation as part of Poons's process. Early dot paintings such as *Han-San Cadence* (1963) exemplify both Poons's compositional techniques and his physical performance of improvisation between drawing and canvas (Figure 2.16). As a counterpoint, I use the paintings of the Filipino-American Valledor, a founding member of the Park Place Gallery in New York. Valledor painted with the intention of intuiting the abstract, illogical, and sensorial traits of music through what he called "spatialized" or "four-dimensional" color. Many of his zig-zag paintings are homages, dedicated to composers and musicians, that attempt to illuminate the ineffable qualities of music, such as those expressed in *Quintessence (for Edgar Varèse)* (1966), a large-format geometric composition (Figure 2.35).

The third chapter provides a discussion of the early work in "spatialized sound" by German composer Stockhausen and an analysis of the eight volumes of the German music periodical *Die Reihe*, which translates to "the row" or "the series," after which I relate these ideas to the early writings and serial sculpture of Sol LeWitt. *Die Reihe*, a little studied journal of postwar serial music edited by composers Stockhausen and Herbert Eimert, was an important source for American artists in the 1960s. Each issue of *Die Reihe* (1955-1962) had a special theme and American artists, including LeWitt, Mel Bochner, Robert Rauschenberg, Tony Conrad, and Dan Graham, read the journal after its translation into English between 1958 and 1968. Despite its extremely technical nature, *Die Reihe* became a primary conduit for new ideas on sound and technology to the avant-garde. For example, Cage first published his seminal essay "Indeterminacy" in the 1959 issue of the journal. By contextualizing *Die Reihe* within the early sculpture and writings of LeWitt, this chapter offers an alternative reading of LeWitt's projects in terms of musical serialism (Figure 3.17). I argue for the affinities between LeWitt's practice and new music theories, particularly those related to mathematics, logic, and spatialized time.

Going from the case of American artist using European music as a source in chapter three, the last chapter considers the sound sculpture of Greek kinetic artist Vassilakis Takis and his relationship to American avant-garde music and poetry. An early member of the kinetic art scene and the community of American Beat poets in Paris in the 1950s, Takis later created several series of sound-producing sculptures in his efforts to capture the unheard sounds of the cosmos, often called the music of the spheres. Takis's sculpture combined his interests in Zen Buddhism, physics, magnetics, sound waves, and time through the use of various metals and magnets. Two early series, the

Signals and the *Musical Sculptures*, relate to sound in different ways. The antenna-like *Signals* act as receivers of vibration, and thus sound waves, from their surrounding atmospheres; while the *Musical Sculptures* create music via the use of electromagnets and piano wires and speakers, producing a cybernetic feedback loop. While the *Signals* originated from Takis's concern with ancient Greek musical instruments, including the Pythagorean monochord and the Aeolian harp, the *Musical Sculptures* emerged after periods of fruitful partnership with artists and composers in the Unites States. For example, he made his first *Musical Sculpture*, *Bruit de vide* (*Sound of Void* or *Noise of Void*), in collaboration with New York School composer Earle Brown (Figure 4.4).

Assessing a State of the Field

Though the art historical sub-field of visual music and sound art studies continues to grow, a single historiography of the field does not exist. Thus far, for an art historian working in the area of visual music or sound art, the methodology of using case studies has proven most useful and direct. However, as historians of this sub-field explore the layers of this under-cited history, a few particular threads of inquiry come to light again and again, underscoring the need for a historiography of the field. Though I myself use case studies and the methodology of cultural history as the basis for my research in visual music, my aim is also to suggest a few theoretical bases for the field of sonic studies. The French linguistic theorist Roland Barthes' 1977 book *Image-Music-Text*, a now-classic series of essays dealing primarily with the so-called "image/text problem," serves as an important model for contending with the seemingly unbridgeable divide between

language and visual arts.[4] In "The Rhetoric of the Image," an essay from *Image-Music-Text*, Barthes writes, "According to an ancient etymology, the word *image* should be linked to the root *imitari*. Thus we find ourselves immediately at the heart of the most important problem facing the semiology of images: can analytical representation ('the copy') produce true systems of sign . . . the image is re-presentation . . . [reputedly] antipathetic to lived experience."[5] The sonic element complicates this linguistic issue of the *paragone*, or the rivalry between the arts, an old battle among critics of music, literature, and art.

First, a few definitions of certain terms can help flesh out the categorizations of artworks that deal with sound and music. For the purposes of this dissertation, "visual music," a term used most completely by Kerry Brougher, curator of the Hirshhorn Museum and Sculpture Garden's 2005 exhibition *Visual Music*, refers to art that engages musical motifs and models. Stuart Buettner, Lewis Kachur, and Simon Shaw-Miller have all written on Pablo Picasso's images of instruments and musical motifs in his paintings, drawings, collage, and sculpture.[6] Shaw-Miller prefers the description "visual deeds of music" for such work, rather than "visual music," in addition to providing key historical context in the introduction to his 2002 book *Visible Deeds of Music: Art and Music from Wagner to Cage*.[7]

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[4] Roland Barthes, *Image-Music-Text* (London: Fontana Press, 1977).
[5] Roland Barthes, "Rhetoric of the Image," in *Image, Music, Text*, trans. Stephen Heath (New York: Hill and Wang, 1977), 32.
[6] See Stewart Buettner, "Catalonia and the Early Musical Subjects of Picasso and Braque," *Art History* 19 (March 1996); Simon Shaw-Miller, *Visible Deeds of Music: Art and Music from Wagner to Cage* (New Haven, CT: Yale University Press, 2002); and Lewis Kachur, "Picasso, Popular Music, and Collage Cubism (1911–1912)," *Burlington Magazine* 135 (April 1993).
[7] Simon Shaw-Miller, *Visible Deeds of Music: Art and Music from Wagner to Cage* (New

The term "visual music" has also been used to refer to some musically inspired abstraction in painting. A 2003-2004 retrospective exhibition at the National Gallery of Art explored the work of Romare Bearden, whose paintings and collage represent different types of jazz.[8] Other oft-cited examples include the Cubist near abstraction of Stuart Davis and the total abstraction of Piet Mondrian, two artists interested in mimicking the rhythms of music in non-representational terms.[9] Peter Vergo's 2010 book *The Music of Painting: Music, Modernism, and the Visual Arts from the Romantics to John Cage* covers a wide range of the effects of "visual music" in European painting.

Most scholarship on American art and music focuses on postwar and contemporary art. Liz Kotz's *Words to Be Looked At: Language in 1960s Art* provides the most comprehensive study of the relationship between text, music, and live actions at the moment of the emergence of performance art as a field of visual art practice.[10] As a most recent case study of "visual music," Leo G. Mazow's *Thomas Hart Benton and the American Sound* presents an extensive cultural history of an oft-mentioned, but rarely discussed, source for many works of the major American Regionalist painter Thomas Hart Benton.[11] In the four chapters of the book—organized by the topics of songs, sounds, anthologizing tendencies, and radio—Mazow weaves together in-depth cultural history of the songs and sound depicted by Benton with careful visual analysis of the

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Haven: Yale University Press, 2002.

[8] See Ruth Fine and Mary Lee Corlett, eds., *The Art of Romare Bearden* (Washington, DC: National Gallery of Art, 2003) and Paul Richard, "Romare Bearden's Blues: The Artist's Rich Collage of Experience," *Washington Post* (Washington, DC), March 14, 1988, B1.

[9] See Harry Cooper, "Mondrian, Hegel, Boogie," *October* 84 (Spring 1998).

[10] Liz Kotz, *Words to Be Looked At: Language in 1960s Art* (Cambridge, Mass.: MIT Press, 2007).

[11] Leo G. Mazow, *Thomas Hart Benton and the American Sound* (University Park, PA: Pennsylvania State University Press, 2012).

works themselves. Mazow writes of Benton's deep engagement with music as both a listener and a practitioner. Mazow's scholarship also engages with depicted images of sound more generally, a subject also covered in case studies of Thomas Wilmer Dewing and Winslow Homer by Asma Naeem.[12]

The expressions "sound art" and "sonic art" more generally denote visual art that has the technical capacity to produce sound or music.[13] However, some classification problems arise. That the term "visual music" implies a reference to music rather than the more general field of sound, for example. Douglas Kahn's 2004 book *Noise, Water, Meat: A History of Sound in the Arts* provides an early model for using the science of sound as a guide for thinking of the possibilities of sound's visuality.[14] Focusing on contemporary sound-producing art, in sculpture and new media more generally, guitarist Alan Licht's *Sound Art: Beyond Music, Between Categories* further problematizes the issue of categorizations of the arts.[15] Trevor Wishart's *On Sonic Art* (1996) and Brandon LaBelle's *Background Noise: Perspectives on Sound Art* (2006) further theorize sound in the context of noise. Lastly, Caleb Kelly's *Sound* (2011) and Jonathan Sterne's *The Sound Studies Reader* (2012) provide recent anthologies of essays on sound art.[16]

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[12] See Asma Naeem, "Splitting Sight and Sound: Thomas Dewing's 'A Reading,' Gilded Age Women, and the Phonograph," *American Quarterly* 63, no. 3 (September 2011).
[13] See Salomé Voegelin, *Listening to Noise and Silence: Towards a Philosophy of Sound Art*, New York: Continuum Books, 2010.
[14] Douglas Kahn, *Noise, Water, Meat: A History of Sound in the Arts* (Cambridge, MA: MIT Press, 1999).
[15] Alan Licht, *Sound Art: Beyond Music, Between Categories* (New York, N.Y.: Rizzoli International Publications, 2007).
[16] Trevor Wishart and Simon Emmerson, *On Sonic Art*, revised ed. (Amsterdam: Harwood Academic Publishers, 1996); Brandon LaBelle, *Background Noise: Perspectives on Sound Art* (London: Bloomsbury Academic Books, 2006); Jonathan Sterne, *The Sound Studies Reader* (New York: Routledge, 2012); Caleb Kelly, *Sound* (London: Whitechapel Gallery, 2011).

Certainly, a large body of mostly representational art depicting *implied* sound rather than music—for example, Winslow Homer's *The Dinner Horn* (1870) or the heated discussion presented in Jean-Baptiste Greuze's genre scene in *The Village Bride* (1761)—indicates the need for a term referring to art that connotes sound without actually making audible sound. Scholar Seth Kim-Cohen comes closest with his classification of "non-cochlear sonic art," the awkwardness of which leaves something to be desired.[17] The issue of silence, explored in depth in a 2012 exhibition at the Menil Collection called *Silence*, presents a challenge to the terms "sound art" and "non-cochlear" art. Under what classification should scholars group works of art about the absence of sound, or near-absence, if one is of a post-Cagean mindset? Salomé Voegelin, author of the 2010 book *Towards a Philosophy of Sound Art*, considers noise and silence two sides of the same coin and purposefully directs silence into the realm of sound art. Voegelin writes, "On the other side of noise, silence promotes listening as a way towards language: not to fragment but to hear the fragments fragmenting. It works from the signifying process of non-sense towards communication."[18]

Lastly, the fields of architecture as well as film and video further problematize these terms. Most of the studies of sonic spaces fall under the umbrella of sound art. Visual music scholars like to address abstract and structural films, sound art scholars claim possession of all but silent film, and film soundtracks occupy the realms of film studies of musicology that fall into the bounds of diegetic versus non-diegetic sound, which includes music. And, of course, the advent of academic departments related to the

[17] Seth Kim-Cohen, *In the Blink of an Ear: Toward a Non-Cochlear Sonic Art* (New York: Continuum Books, 2009), xvi – xxi.
[18] Salomé Voegelin, *Listening to Noise and Silence: Towards a Philosophy of Sound Art* (New York: Continuum Books, 2010), 87.

history of the moving image, often falling under the headings of film or cinema studies, techno-media, media studies, and radio-television-film, further complicate the place of film and video in art historical scholarship. To my mind, this increased specialization of truly multi-disciplinary arts such film and video has the capacity to both help and harm with regards to the larger issue of the separation of the arts.

W.J.T. Mitchell has written extensively on the development of interdisciplinary studies in art history, noting that the term has become so widely used that most emerging artists refer to their work as inter- or multi-disciplinary; likewise, he argues that art history departments have to promote their interest in interdisciplinary studies for fear of seeming hopelessly old-fashioned, or even retrogressive. Mitchell uses the term "indiscipline" to describe work done on the blurry edges or boundaries of the arts. He writes that indisciplinarity is "turbulence or incoherence at the inner and outer boundaries of disciplines. If a discipline is a way of insuring the continuity of a set of collective practices (technical, social, professional, etc.), 'indiscipline' is a moment of breakage or rupture, when the community is broken and the practice comes into question."[19] And yet, for interdisciplinary scholars, there exists a constant question of expertise, the nagging fear of being a jack-of-all-trades, but master of none.

My own experience working in art history and music history has produced challenges for me as I have endeavored to learn difficult musical languages for which I have developed an alternative program of training, including collecting records and taking courses in composition. However, I am committed to understanding the musical concepts that artists use, in part so that I can also understand their misapplications of

[19] W.J.T. Mitchell, "Interdisciplinarity and Visual Culture," *Art Bulletin* 77, no. 4 (December 1995): 541.

musical concepts. In other words, I need to know where they got it wrong, even in producing highly creative work in the process.

Musical Ekphrasis and the Rivalry Among the Arts

Jean-Jacques Rousseau, the Enlightenment thinker, wrote the first dictionary of music in 1768, a sign of codification of the arts. In it, he wrote under the entry for "imitation" that music is an imitation of nature, but not a direct representation. He further stated,

> All that the imagination can represent to itself has its origin from poetry. Painting, which does not offer its picture to the imagination, but to the sense, and that one sense alone, paints only objects peculiar to the sight. Music would appear to have the same bounds in regard to the hearing; however, it paints all, even the objects which are not visible; by a transformation almost inconceivable, it seems to place the eye in the ear . . . . "[20]

A central tenet for the study of "visual music" is that of imitation or mimesis in terms of what visual art can take from musical sources. In other words, in what ways does art that uses music as a source attempt to imitate or translate ideas across the media? This question has led to many debates over what the specific arts are supposed to do and how successfully they can actually do it. In poetry and prose, the art of writing about a visual image is *ekphrasis*, the verbal representation of visual representation, an example of which is John Keats' "Ode on a Grecian Urn" (1819).[21] This is a word-image

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[20] Siglind Bruhn, *Musical Ekphrasis: Composers Responding to Poetry and Painting* (Hillsdale, NY: Pendragon Press, 2000), 13.

[21] In writing of an ancient Greek vase, Keats invokes the metaphor of the music of the spheres, a central tenet of Takis's sculpture of the 1950s, in writing, "Heard melodies are sweet, but those unheard / Are sweeter; therefore, ye soft pipes, play on; / Not to the sensual ear, but, more endear'd, / Pipe to the spirit ditties of no tone" (http://www.poetryfoundation.org/poem/173742).

relationship. For me, it is most useful to think of these trans-media approaches as intertextual, to use Poststructural theorist Julia Kristeva's term. For Kristeva, a text is any given semiotic sign or thing that can have meaning, and simply stated, intertextuality means that one text informs the meaning of another text.[22] Though the term intertextuality has certainly been co-opted out of its original linguistic context, I still think it useful as a means for historians to "read" objects of inquiry in terms of other objects. For example, a traditional musical score is a textual written code for a given performance and the interesting things happen in that space between the score and the produced sound itself.

Siglind Bruhn's book *Musical Ekphrasis* applies the literary idea of ekphrasis to composers in arguing that composers enact musical ekphrasis in using texts, both verbal and non-verbal, as sources. Composers thus follow the same conventions and make the same demands on the audience as literary ekphrasis. Furthermore, a kind of "reverse ekphrasis" exists for visual art that "represents" works of literature or music.[23]

A few arguments arise again and again. One is that literature and visual art belong in a separate class from temporal arts like dance and music. Temporality leads to gaps in apprehension and historically forces a reliance on memory. One must bear in mind that it was not until the invention of recording technologies in the late nineteenth century that one could experience dance, theater, or music without being physically present at its live performances. If music is immaterial, for example, can it ever be an imitation of something, as claimed by Rousseau? And what does it imitate—other sounds, the voices

[22] See Julia Kristeva, *Desire in Language: A Semiotic Approach to Literature and Art*, ed. Leon Roudiez (New York: Columbia University Press, 1980).
[23] Bruhn, *Musical Ekphrasis*, 7.

of humans, and nature? Is this not still an issue of intertextuality; for example, how does the sound of a human voice create meaning for the sound of a violin? For Arthur Schopenhauer, whose quote about that "all art aspires to the condition of music" opens this dissertation, and others, the power of music came from its authenticity, or lack of ability to actually and fully imitate something else.

Theoretical positions such as these, divergent as they are, speak to the need to construct models of music and art as both communicators and receptors—as object and subject—and the space between these two modes may be best described by the German term *Augenblick*. The *Augenblick* is translated as the "blinking of an eye," but connotes slightly more than that: the reception and perception of visual information. Putting this idiom into sonic terms, Kim-Cohen thoughtfully describes his concept of the *Ohrenblick*, the "blinking of an ear," which references the space between hearing information and understanding or ordering it.[24]

Gotthold Lessing's 1766 *Laokoon: Or, On the Limits of Painting and Poetry* and Irving Babbitt's 1910 *The New Laocöon: An Essay on the Confusion of the Arts* present early treatises on the usefulness of medium specificity. Taking the famous Hellenistic sculpture group of the Trojan priest Laocöon and his sons being killed by serpents as their leitmotif, Lessing and Babbitt contended that visual art is static and cannot approach the emotionally expressive capabilities of literature. Art should not try to be emotional; it's best to leave that to poetry and music. After the 1950s and 1960s, formalist criticism championing medium specificity, particularly for abstract painting, dominated the discourse on American art. The cultural historian and interdisciplinary scholar has to

[24] See the introduction to Seth Kim-Cohen, *In the Blink of an Ear: Toward a Non-Cochlear Sonic Art* (New York: Continuum Books, 2009).

work around criticism by Michael Fried, Donald Judd, and especially, Clement Greenberg. As early as 1940, Greenberg argued for a purity of media due to what he saw as confusion in the arts. Coming out of the tradition of New Criticism in literature, Greenberg's approach was one of a bias toward the formal elements of painting. For him, there was no room for other disciplines to muddy the waters. The title of his famous essay on the division of the arts, "Towards a Newer Laocöon," comes from Lessing's and Babbitt's texts. In his 1940 essay, Greenberg writes of the confusion of the arts belying a purity, stating,

> Discussion as to purity in art and, bound up with it, the attempts to establish the differences between the various arts are not idle. There has been, is, and will be, such a thing as a confusion of the arts. From the point of view of the artist engrossed in the problems of his medium and indifferent to the efforts of theorists to explain abstract art *completely*, purism is the terminus of a salutory reaction against the mistakes of painting and sculpture in the past several centuries which were due to such a confusion.[25]

But what happens when art is not static, as with burgeoning performance art in the 1950s? For someone like Jackson Pollock, the expressive potential is realized not only in the formal qualities of his "action painting," to use Harold Rosenberg's term, but by the process.[26] The act of painting these monumental canvases becomes a temporal one, an unchoreographed dance set to the jazz records that he listened to constantly in his studio. Similarly, Pollock's admirer Allan Kaprow, a student of John Cage's experimental music classes at the New School for Social Research, wrote in his 1958 essay "The Legacy of Jackson Pollock" that Pollock had taken painting to its limits and that artists after Pollock

[25] Clement Greenberg and John O'Brian, *The Collected Essays and Criticism*, Volume 1 (Chicago: University of Chicago Press, 1988).
[26] Harold Rosenberg, "The American Action Painters" *Art News*, 58 (December 1952): 22-23, 48-50.

needed to embrace the performative aspect of his work and take it outside of the studio.[27] What followed then were Happenings, not quite body art, not quite theater, not quite musical concerts, but rather, time-based performances constructed in an environment.

By the early 1960s, this confusion of the arts became manifest through performance, and particularly the trans-Atlantic multi-media concerts of Fluxus. Here were composers who employed artists as their musicians, opening the parameters of classical music beyond the professionally trained. Many of these performances relied on written texts. George Brecht coined the term "event score" in 1961, meaning a series of open-ended directions for performance. These played with the idea of notation, the language of music, through negating it, allowing for improvised performance on the part of the performer. Who could score, exactly, the sounds meant to be produced by a musician splashing in a bathtub on stage, as Paik did in Karlheinz Stockhausen's "opera" called *Originale*? Fluxus represents a reaction to what composers in the 1960s saw as the tyranny of Western music. What better way to decenter that musical oppression than to deny the traditional use of key and time signatures in a score, classical music's textual proof, and destroy the instrument, the sculptural object? What this did was allow for a certain kind of delayed spontaneity and nuanced simultaneity in the improvisation of combining media from music, theater, dance, and visual arts. Fluxus artist Dick Higgins codified this interdisciplinarity in his 1966 "Statement on Intermedia," in which he emphasized intermedia as the space between media. Using Greenberg's own language on the purity of the arts, Higgins stated,

[27] Allan Kaprow, "The Legacy of Jackson Pollock." *Art News* 57 (October 1958): 24-26, 55-57.

> For the last ten years or so, artists have changed their media . . . to the point where the media have broken down in their traditional forms, and have become merely puristic points of reference. The idea has arisen . . . that these points are arbitrary and only useful as critical tools, in saying that such-and-such a work is basically musical, but also poetry. This is the intermedial approach, to emphasize the dialectic between the media. A composer is a dead man unless he composes for all the media and for his world.[28]

In the United States, the specificity of media had broken; in France, Pierre Restany, reacting against Greenberg, called this the "post-Laocöon" condition.[29]

For art history, a disconnect exists between the object and the historian's description of the object in written form. There is a failure, but one that allows for very interesting potential at the boundaries of two disciplines. And improvisation breaks down that boundary even further. At what point does putting pencil to music paper, the action of writing the score, negate the improvisational properties of the response? And then, at what point does a live or recorded performance, which may or may not even follow the score, become its own improvisation on an improvisation?

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[28] Dick Higgins, "Statement on Intermedia," 1966. Cited in Elizabeth Armstrong, "Fluxus and the Museum," in *In the Spirit of Fluxus,* ed. Elizabeth Armstrong and Joan Rothfuss (Minneapolis: Walker Art Center, 1993), 14.

[29] Pierre Restany, "Les Estafilades d'Orphée," in *Takis*, ed. Jonathan Robertson (Athens, Greece: Galerie Zoumboulakis / Athens Publishing Center, 1974), 31-32.

Chapter One: La Monte Young: Early Compositions and Performances (1956-1965)

Introduction

At a noon time chamber music concert at the University of California at Berkeley in the spring of 1960, composition student and conceptual artist La Monte Young premiered his most recent work, titled *Poem for Chairs, Tables, Benches, Etc. or Other Sound Sources*. This "conceptual composition"—so called because the idea, rather than the effect, pertained to the compositional text—dictated loosely that performers push, pull, or drag furniture such as the piano bench across the stage floor. The music, then, consisted of the sounds resulting from these largely visual and physical actions. During the performance, musicians ambled around reading music textbooks aloud, a woman fried eggs on the stage, another woman rested in a sleeping bag in the aisle, composer Terry Riley played catch with a friend on stage, and the artist Bruce Conner walked around the auditorium with a cricket in his shoe. Meanwhile, Young concentrated his efforts as conductor of his orchestra by repeatedly shouting "Green!" into a bucket on the stage.[30]

How were contemporary audiences meant to understand such works—as musical performances, as theatre, or as illogical neo-Dada exhibitions? These questions may be answered by examination of the four concerns that united Young's compositions during the period from 1958 to 1961, with precedents leading back to 1956. First, almost all of them allowed for the performer's improvisation, making them chance operations; secondly, the performer's action, rather than specific instruments, created incidental

[30] La Monte Young, interview with the author, New York City, March 15, 2004 and March 19, 2004. See also William Duckworth, *Talking Music* (New York: Schirmer Books, 1995), 235.

sound; thirdly, none of the compositions specified any set duration, forcing the performer to tackle the issue of time; and finally, most of the compositions necessitated the direct or indirect participation of the audience. Young described his artistic ethos in a 1979 interview, stating, "Everything I have ever done in music has come directly in this intuitive process where I've tuned into some greater force – some sense of universal structure that I try to tune into. This thing comes through me, it comes out and this is the kind of music you hear."[31]

Young was a member of the avant-garde in both the San Francisco Bay Area and in New York in the 1950s and 1960s. He studied jazz, composition, and ethnomusicology at UCLA and later as a graduate student at Berkeley. In 1959 he traveled to Germany to study serial and electronic composition with Karlheinz Stockhausen, David Tudor, Earle Brown (whose collaboration with the Greek artist Takis I discuss in the fourth chapter), and Christian Wolff. Young then moved to New York in 1960 to study electronic music under Richard Maxfield at the New School for Social Research. Beyond his musical pedigree, Young played a key role in the formation of Fluxus and the burgeoning field of conceptual art. As a performance artist, Young himself also served as musician and actor in various concerts, theater, and film productions of the 1960s. He formed an experimental band called the Theatre of Eternal Music in 1962, and they created multimedia concerts in various incarnations until the mid-seventies. Young and his partner Marian Zazeela began making sound and light environments called Dream Houses in 1968. Starting in 1970, Young and Zazeela embarked in the serious study and performance of North Indian classical music – and singing raga in particular – and this

[31] Kenneth Terry, "La Monte Young: Explorer of the L-O-N-G Tone," *Downbeat* 46 (April 19, 1979): 40.

has remained their foremost pre-occupation to the present. Although historians traditionally recognize South Asian music and metaphysical philosophy as the key non-Western sources for Young, he has also identified Zen Buddhism as a source for him while both a composition student at Berkeley in the 1950s and a colleague of artists such as John Cage and Yoko Ono in New York in the early 1960s.[32]

Young and Zazeela have asserted many times that they consider time their artistic medium. As Zazeela stated, "If you think the medium is time, then the observer is going through a process of cognition of what time is."[33] It should be noted however, that Young did not possess a physicist's conception of time. Although he had several physicist and mathematician colleagues, including the Berkeley composer Dennis Johnson, Young himself had not personally read much of Albert Einstein, Hermann Minkowski, or even Henri Bergson in his formative period. Instead, his understanding of time was always filtered through either his friends' discussions of Einstein or its use in music and, more specifically, as an intuitive cosmic element of the universe as he understood it from Buddhist and other metaphysical literature. He gleaned from sources including the *I-Ching*, the *Tao Te Ching*, Russian philosopher and mystic P.D. Ouspensky's *Tertium Organum*, and various Zen poets a notion of time that is both meditative and observer driven, akin to the experiential time espoused by his mentor Stockhausen, to be discussed more fully in chapter three of this dissertation.

All music exists in time; it is therefore a crucial element of the understanding of and listening to music. In Western music, scores indicate time in three ways. The first is

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[32] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[33] La Monte Young and Marian Zazeela, "La Monte Young – Marian Zazeela: An Interview," by Ian Nagoski, *Halana* 1 (November 1995): 33.

the key signature, which alerts the musician to the number of beats per measure. The second is the meter, which indicates the number of beats per minute; in notation, this often presents as the number of quarter notes per minute. Lastly, the number of measures designates duration, where each measure represents a segment of time parceled out over a continuum. Represented visually as the vertical lines that divide the five lines of each staff of music, measure are also often represented with numbers at the beginning of each staff, telling the musician the number of measures in that line of music.

Young's career as a composer has had three distinct phases. From 1956 to 1958, he composed serial music in the manner of Webern and Stockhausen. From 1959 to 1961, he created open-ended event scores that eventually served as the basis for much Fluxus performance. From 1962 to the present, Young has composed only a few epic continuous works that use tones or harmonies held for sustained periods, creating a drone effect. However, even his serially composed pieces from the mid-fifties show his early interest in using sustained tones that he admired from Hindustani music.

Young would come to be known as the "Father of Minimalist Music," a style that emerged in the mid-1960s and included Terry Riley, Steve Reich, and Philip Glass, who created what was then termed "hypnotic" or "static" music.[34] Notably, Young, Riley, and Reich all knew each other while attending graduate school in composition in California in

[34] Duckworth, *Talking Music*, 210. Artists often used the term "static music" to describe Minimalist music. See, for example, Walter De Maria, interview by Paul Cummings, New York City, October 4, 1972, Smithsonian Institution / Archives of American Art, n.p. For discussion of the term "hypnotic music," see Tom Johnson, "La Monte Young, Steve Reich, Terry Riley, Philip Glass," *The Village Voice* (New York, September 7, 1972), reprinted in Tom Johnson, *The Voice of New Music: New York City, 1972-1982* (Eindhoven, The Netherlands: Het Apollohuis, 1989), 43-45. In the late 1970s, Young had been named "the daddy of us all" by the experimentalist and musician Brian Eno and "the mother of us all" by fellow composer Ingram Marshall. See Edward Strickland, *Minimalism: Origins* (Bloomington: Indiana University Press, 1993), 122.

the late 1950s, and all three of them relocated to New York City in the early 1960s.[35] They created this "hypnotic" or "static" music through composition and performance that emphasized the use of repetition, a tendency that they found anchored in both Renaissance polyphonic rhythms and most especially, South and East Asian musical tradition.[36]

However, in some ways, one might consider the term Minimalist a misnomer because, in fact, this music maximizes the possibilities for the single tone. Young's early work, such as that with Fluxus and the Theatre of Eternal Music, seemed to extend nearly every aspect of sound and performance in his creation of multisensory events. The term "Minimal Music" generally does not sit well with composers or musicologists due to its restrictive nature. The use of the label Minimalism speaks broadly to an extreme reduction of musical means – namely, sounds, tones, and harmonies – present in most of the mature work of these composers; yet, the term itself implies that this reduction is the most important facet of the music. Musicologists have generated alternative names for this kind of music, including repetitive music, acoustical art, and meditative music, but each of these has its flaws in excluding aspects of one or more of these composers' work.

This chapter examines the four earliest phases of La Monte Young's musical career, considering him a founder of a type of performance art emerging from musical practice. The first section of the chapter introduces Young's musical background in jazz and improvisation, and his early training in classical composition. The second section of

[35] In fact, all three of these composers were in the Bay Area of California in the late 1950s. Young and Riley studied composition at the University of California at Berkeley and Reich was a student at Mills College in Oakland.
[36] Wim Mertens, *American Minimal Music*, English Edition, trans. J. Hautekeit (London: Kahn and Averill, 1983), 12-13.

this chapter looks at Young's early classical compositions, those ranging from 1956 to 1959, when he left California to study in Darmstadt with Karlheinz Stockhausen at the *Ferienkurse für neue Musik* (Summer Courses for New Music). As a composition student at Berkeley in the late 1950s, Young became disillusioned with what he viewed as stifling elitism in musical academia. As a response, he created two series of typeset event scores or "conceptual compositions" in 1960 and 1961, the subjects of the third section of this chapter. These opened up the playing field of musical performance to both trained musicians as well as non-musicians, and often, visual artists. I therefore argue for a democratizing sensibility for emerging avant-garde composers, including Young, who helped organize early Happenings and Fluxus concerts. Several of Young's event scores became mainstays of Fluxus performance. One example is his *Composition 1960 #10 to Bob Morris*, which was performed several times by Nam June Paik as *Zen for Head*, a meditative and mostly visual action (Figure 1.1). In addition, this section looks more deeply at Young's primary sources in metaphysical philosophies, including the Vedas and Zen. The last section of this chapter considers Young's founding of the drone band the Theatre of Eternal Music in 1962 and some of their performances until 1965.

In considering the visual legacy of these conceptual compositions, this chapter also recognizes the year 1960 as a pivotal moment in Young's career, first as he served as music director to Ann Halprin's dance company in Kentfield, CA, and then as he moved permanently to New York. The final section of the chapter explores the earliest iterations of the Theatre of Eternal Music, which helped introduce proto-psychedelic culture to many New York artists, including the painter Larry Poons, the subject of chapter two

(Figure 1.2).[37] Using these four phases of Young's early career, I argue that he uses time as a malleable artistic medium in order to foster a state of expanded consciousness, all in the service of getting inside sounds through live performance. I thus position Young as an interlocutor between the worlds of avant-garde music and art in exploring a cultural history of his event scores, their adaptations, their performances, and Young's role in the discourse on intermedia.

Musical Beginnings

Born in 1935 in a log cabin in Bern, Idaho, Young recalls becoming interested in the sound of wind as a young child. His family was extremely active in the Mormon Church, which emphasized both extended daily religious activity and, importantly to Young's later pursuits in music, the concept of eternity.[38] At the same time, his family was quite musical and encouraged him to play in school orchestras. At the age of five, Young moved with his family to Los Angeles, where his aunt Norma began teaching him cowboy songs and the basics of the guitar. Several years later, Young began to learn the saxophone from his father. When the family moved to Utah around 1945, Young's uncle Thornton, who had been in a Los Angeles dance band in the 1920s and had been an active observer of the Kansas City jazz scene, gave Young advanced lessons in saxophone and introduced him to jazz.[39]

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[37] My Master's thesis, "Soundtrack to the Avant-Garde: La Monte Young, Marian Zazeela, and the Theatre of Eternal Music, 1958-1968" (M.A. Thesis, University of Texas at Austin, 2005) covers the full history of the Theatre of Eternal Music more broadly.
[38] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 22-23.
[39] *Ibid.*, 24.

Eventually, the family moved back to Los Angeles. There, Young attended John Marshall High School, which had a specialized music program that allowed students to major in music and had become famous for the jazz greats that it graduated. Young played alto saxophone in various bands and listened to jazz legends such as Lenny Tristano, Lee Konitz, Stan Getz, Lester Young, and especially Charlie Parker. After graduating from high school, Young attended Los Angeles City College, well-known for its jazz orchestra, which Young joined. He became a friend of classmate Eric Dolphy, the famed experimental saxophone and clarinet player, and often performed at a South Los Angeles club called The Snake Pit. He has described his style of jazz from the time as "a combination of Charlie Parker and Lee Konitz . . . . Cool jazz and bebop."[40] At The Snake Pit, Young first met Billy Higgins and Don Cherry and eventually played in a band with Higgins as well.[41]

Young's career-wide concept of improvisation developed out of his understanding of jazz and he had first learned of the concepts of improvisation as a jazz and blues musician at LA City College. As a student, Young learned to improvise on the saxophone, the instrument with which Charlie Parker had introduced free jazz.[42] With some of his foundational works, such as his *Poem . . .*, *2 Sounds*, and the *Compositions 1960*, to be discussed later in this chapter, Young improvised not only in the sound created, but the action performed to create the sound. Creative improvisation became a fundamental aspect of Young's music ideology. In jazz improvisation, a skill difficult to

[40] Duckworth, *Talking Music*, 224.
[41] Mark Webber, "La Monte Young Meets Mark Webber" *The Wire,* Issue 178 (December 1998): 37.
[42] Young had also played with free jazz luminaries Don Cherry and Ornette Coleman in the late 1950s.

learn and impossible to perfect, an individual plays music chosen as a combination of set musical pieces, often creating entirely new works. This had become a fixture of jazz in the 1940s and 1950s. Musicians memorize certain pieces and subsequently recall them at will, often as a solo during a set.[43] This notion of improvisation runs counter to the concept of *free* improvisation, an even more complicated style that emerged later in the 1960s, which more fully embraces spontaneity as an act of deep listening to and collaborating with the sounds made by the entire orchestra or ensemble.[44]

While at LA City College, Young met Leonard Stein, a former student of Arnold Schoenberg, and became interested in classical music. Stein introduced Young to the compositions of Anton Webern, Bèla Bartók, Claude Debussy, and Karlheinz Stockhausen; eventually, Young gave up performing jazz in order to devote his time to

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[43] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[44] For more on jazz improvisation, see Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York: Da Capo Press, 1993), 48-58. In the world of freely improvised music, such as that pioneered by Peter Brötzmann, Keith Rowe, the British ensemble AAM, Joëlle Léandre, Wadada Leo Smith, Anthony Braxton, and Pauline Oliveros, deep and long-standing arguments about the nature of improvisation persist among musicians and composers. For almost all of the figures in this international music scene, a primacy is placed on live performance experienced in its original moment; therefore, many musicians and composers object to the recording of freely improvised music. Though outside the scope of this dissertation, this hotly debated subject only enhances my own argument that visuality is a key factor of musical performance. I thank my dear friends Pete Gershon, founder and publisher of the avant-garde jazz journal *Signal to Noise* (1998-2013), David Dove, trombonist and founder of the Houston musical organization Nameless Sound, and Houston-based double bassist Damon Smith (trained in the Bay Area and a frequent contributor to the film soundtracks of Werner Herzog), and for their many insights on the history of improvised music. These three colleagues participated in the symposium "Hearing Postwar Art," which I organized during my research fellowship at the Menil Collection, Houston, during 2012-2013. At the symposium, in May 2013, Dove and Smith both performed Fluxus-era works during the symposium, including Cornelius Cardew's *Treatise* and Benjamin Patterson's *Variations for Double Bass*, for which Smith used original instrument preparations dating from 1961 that Patterson gave to him directly.

composition and piano performance. At this time, Young also met Terry Jennings, a composer several years behind him in school who played alto saxophone and who sometimes accompanied Young's piano performances.[45]

Young's impetus for composing was the serial method originally developed by Schoenberg and two of his students and collaborators, Anton Webern and Alban Berg, in Austria in the 1920s. Since the 1910s, Schoenberg had experimented with a method of composing in twelve tones, thus breaking down previous tonal structure to embrace what he called "pantonal" or "atonal" music. He also pioneered the idea of musical dissonance as author of the phrase "the emancipation of dissonance" in his 1926 essay "Opinion or Insight?"[46] According to music historian Elliott Antokoletz, "Free atonality originated in an attempt to equalize the value of the twelve notes of the chromatic scale, so that they would no longer form a hierarchy of functions so fundamental to the chromaticism of the traditional tonal system."[47] The method of serial composing refers to the arranging of the twelve notes of the chromatic scale into a preset order (or series). The series then creates harmonies or melodies out of the dodecaphonic tone series.[48] In the mid-1940s, serialism experienced a revival under the leadership of Cage, who had been a student of Schoenberg at UCLA. In the early 1950s, Cage led a group of composers interested in serialism and aleatoric or chance composition called the "New York School," comprised

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[45] Webber, "La Monte Young Meets Mark Webber," 37-38.
[46] Arnold Schönberg and Leonard Stein, *Style and Idea: Selected Writings of Arnold Schoenberg* (Berkeley, CA: University of California Press, 1985), 258-264. See also Philip Alperson, "Schopenhauer and Musical Revelation," *The Journal of Aesthetics and Art Criticism* 40, no. 2 (Winter 1981): 155-166.
[47] Elliott Antokoletz, *Twentieth-Century Music* (Englewood Cliffs: Prentice Hall, 1992), 10.
[48] Paul Griffiths, "Schönberg, Berg, and Webern," *Heritage of Music, Volume IV: Music in the Twentieth Century,* ed. Michael Raeburn and Alan Kendall (Oxford: Oxford University Press, 1989), 195.

of Cage, Christian Wolff, Earle Brown, Morton Feldman, and David Tudor. In addition, the International Summer Courses for New Music at Darmstadt, originated by Wolfgang Steinecke in 1946 and continued by Karlheinz Stockhausen in the late 1950s (and which Young attended in 1959), emphasized Schoenberg's and Webern's twelve tone methods.[49] As a composition student in the late 1950s, Young had no choice but to confront serialism, by then the dominant mode of new music.

Early Classical Works, 1956-1959

One may think of Young's classical works from 1956 to 1959 as setting up the principles of his mature work. Musicologist Jeremy Grimshaw, in his 2011 book *Draw a Straight Line and Follow It: The Music and Mysticism of La Monte* Young, asserts of Young's oeuvre,

> [Young's] entire career can be seen as an ongoing effort to eliminate the arbitrary or unscrutinized, the inherited, the 'constructed'; to realize within the medium of sound certain universal governing principles . . . . In its ideal state, Young's music seeks to *be* the principles on which it is based rather than merely to reflect them."[50]

This consideration helps set up the dialectic between Young and one of his early sources, and the composer best known in art history, John Cage.[51] While at LA City College, and

[49] Antokoletz, *Twentieth Century Music*, 369.
[50] Jeremy Grimshaw, *Draw a Straight Line and Follow It: The Music and Mysticism of La Monte Young* (New York: Oxford University Press, 2011), 17.
[51] Interestingly, Cage does not occupy the same airspace in music history that he does in art history. Cage and Richard Wagner are no doubt the two most referenced composers in the histories of modern and contemporary art, with Philip Glass and Igor Stravinsky not far behind. For art historians, Cage is seen as the epitome of innovation in mid-century music, but many musicologists view him as an eccentric aberration in the more complicated history of twentieth century music. I thank Philip Ford, formerly of the University of Texas at Austin and presently at the Jacobs School of Music at the

later at UCLA, Young experimented with serially composed works after hearing records by Cage. In the summer of 1956, Jennings introduced Young to Cage's first composition for string quartet of the 1950s, *String Quartet in Four Parts* (1950). Around the same time, Dennis Johnson shared with Young a record of Cage's *Sonatas and Interludes for Prepared Piano* (1946-1948).[52]

Young's composition process for his work from 1958 to 1960 must be understood against the background of Cage's aleatoric practices, particularly in reference to live performance. As early as the 1930s, while rethinking his serialist composing tendencies, which demanded a composer's complete control over his music and its performance, Cage began experimenting with chance composition. Around 1938, while teaching at the Cornish School in Seattle, he started using recorded sounds and manipulated phonograph records in his compositions. At the same time, out of the need to create certain sounds in works such as *Bacchanale* (1938), he also began making his "prepared pianos," in which he carefully and systematically inserted rubber, metal, and wooden objects between the strings of a piano (Figure 1.3). Cage has explained that "the objects work as mutes, and the sound becomes softer than an ordinary piano, and quite a bit different."[53] Many musicologists have noted that the objects between the strings also transformed the piano into a highly percussive instrument reminiscent of the Indonesian gamelan; while at the

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University of Indiana, for his insights on Cage's position in art history versus music history. Ford's course "Music in the 1950s" helped introduce me to this particular discrepancy between the two fields of scholarship. Fortunately, scholars including Liz Kotz and Douglas Kahn address these issues more carefully in art history, using terms such as "post-Cagean" to describe the decades of the 1960s and 1970s, when Cage focused his energies on creating music for the Merce Cunningham Dance Company.

[52] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski," 26.

[53] Richard Kostelanetz, *Conversing with Cage* (New York: Limelight Editions, 1988), 58.

Cornish School, Cage had become deeply interested in both the teachings of Zen Buddhism, and particularly those of D.T. Suzuki, and non-Western music. In terms of the philosophy behind his seminal *Sonatas and Interludes for Prepared Piano* (1946-1948), Cage dedicated the works to Ananda K. Coomaraswamy, theoretician of Asian aesthetics, and what Cage extrapolated as the idea of expressing the full range of "permanent emotions," such as fear, anger, ecstasy, and tranquility.[54] Another prepared piano piece from the same period, *Music for Marcel Duchamp* (1947), showed Cage experimenting with repetition.[55] In addition to creating sonic instruments, however, Cage managed to transform his pianos into unique visual objects viewed as works of art in their own right. In the early 1960s, this treatment of the piano would unfold not only in objects such as Nam June Paik's *Klavier Integral* (Figure 1.4), but also Happening and performance art pieces by artists such as George Brecht and Joseph Beuys (Figure 1.5).

Non-Western music and the Zen Buddhist philosophy of D.T. Suzuki were central sources to Cage's interests in aleatoric composition and sound's constitution as music. According to Elliott Antokoletz, Cage first used chance operations in his composition by consulting the divination sticks of the *I Ching*, the ancient Chinese book of divinations. He would regularly toss the *I Ching* sticks to determine which mathematical proportions

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[54] Richard Kostelanetz, *John Cage (Ex)plain(ed)* (New York: Schirmer Books, 1996), 56. In his groundbreaking 1934 treatise on Asian art theory entitled *The Transformation of Nature in Art*, Coomaraswamy proposes that all of the arts derive from heavenly inspiration and thus synthesize in the mind through the commonality of mathematics. Coomaraswamy writes, ". . . Asiatic art is ideal in the mathematical sense: like Nature . . . not in appearance . . . but in operation." See Ananda K. Coomaraswamy, *The Transformation of Nature in Art*, 2nd Edition (New York: Dover Publications, 1956), 11. For a full discussion of Coomaraswamy's impact on twentieth century art, see David J. Clarke's *The Influence of Oriental Thought on Postwar American Painting and Sculpture* (New York: Garland Publishing, 1988).

[55] Paul Griffiths, *Modern Music and After*, 3rd ed. (Oxford / New York: Oxford University Press, 1995), 25-27.

he would use for elements such as tempi and duration in the compositions.[56] Works such as *Imaginary Landscape No. IV* and *Music of Changes* were composed in this manner.[57] Edward Strickland argues that these two 1939 works prefigure the structure of Minimalist music through the use of variable speeds to produce what Cage called a "micro-macrocosmic rhythmic structure."[58] The chance composition of such works owed a debt to Marcel Duchamp's ideas of "canned chance" and chance operations, such as those found in his *Green Box* (1934), the set of notes and images later made as the companion to *The Bride Stripped Bare by Her Bachelors, Even*, or *The Large Glass* (1915-1923); Cage and Duchamp had known one another since the early 1940s.[59]

In the 1950s, Cage had begun to experiment with the idea of compositional notation itself through his desire to allow for greater interpretation on the part of the performer. These scores, although textual in theory, came to be considered visual objects as well. According to Douglas Kahn, Cage did not believe in the concepts of "imaginary sounds" or silence because "all matter was sonorous."[60] In other words, Cage thought that the human conception of silence was merely an indication of inaudible sound. In 1952 Cage introduced his most infamous composition, *4'33"*, which required that a performer sit at a piano and make no intentional sound for the exact duration of four minutes and thirty-three seconds. Known as the "silent piece," *4'33"* stunned the musical elite

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[56] Antokoletz, *Twentieth Century Music*, 476.
[57] John Cage, *Silence*, Wesleyan Paperback Edition (Middletown, CT: Wesleyan University Press, 1973), 57-60.
[58] Strickland, *Minimalism: Origins*, 125.
[59] Calvin Tomkins, *The Bride and the Bachelors: Five Masters of the Avant-Garde* (New York: Penguin Books, 1976), 94. For Duchamp's use of the term "canned chance," see Marcel Duchamp, *The Essential Writings of Marcel Duchamp*, ed. Michel Sanouillet and Elmer Peterson (London: Thames and Hudson, 1975), 33.
[60] Douglas Kahn, *Noise Water Meat: A History of Sound in the Arts* (Cambridge, MA: The MIT Press, 1999), 236-237.

because of its audacious use of incidental and atmospheric sound as music.[61] Of this new interpretive freedom, Cage declared, "We need first of all a music in which not only are sounds just sounds but in which people are just people, not subject, that is, to laws established by any one of them, even if he is 'the composer' or the 'conductor.'"[62] Eventually, Cage simplified his sentiment into his well-known mantra to "let sounds be themselves."[63]

Yet, Cage's overarching authority in avant-garde music, combined with his consideration of any sound being music, posed unique concerns for "post-Cagean" composers constantly struggling to outdo Cage, who reigned as the touchstone for avant-garde music until his death in 1992. As Kahn writes of composers confronting the permissive Cagean aesthetic, " . . . So much was allowed that nothing, it might seem, was left to be set free."[64] Cage's allowance for improvisation had an immense impact on many of his students, and particularly on Young's conceptions of chance operations and the mixed means performance pieces that he referred to as the Theatre of the Singular Event.[65] This term indicates two of Young's interests: live performance or "theatre" and a continuity of one event.[66] Yet, whereas Cage embraced the human absorption of

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[61] Kostelanetz, *John Cage (Ex)plain(ed)*, 54.
[62] Kostelanetz, *Conversing*, 257.
[63] Kahn, *Noise Water Meat*, 163.
[64] Douglas Kahn, "The Latest: Fluxus and Music," *In the Spirit of Fluxus*, ed. Janet Jenkins (Minneapolis: Walker Art Center, 1993), 104.
[65] Richard Kostelanetz and La Monte Young, "La Monte Young," in *The Theatre of Mixed Means: An Introduction to Happenings, Kinetic Environments, and Other Mixed-Media Performances*, ed. Richard Kostelanetz (New York: Dial Press, 1968), 192, 214, 216.
[66] This continuity of a singular event ran counter to the operation of most Fluxus events, which tended to be chaotic and fast-paced. This was one reason that Young ultimately separated himself from the Fluxus group; as he told me, Fluxus humor bothered him in that it made him question the interest in his unorthodox music as "serious." For Young,

individual sounds as Zen-tinged personal experience, Young grew to espouse the idea of creating an outward space of constant sound as a meditative environment.[67] Therefore, Young, while still under Cage's wing but wanting to further his own aesthetic, established a new set of parameters for composition as performance and event.

By November of 1956, Young had written *Five Small Pieces for String Quarte*t, which drew heavily upon the serialism of Webern. In 1957, he composed *Variations for Alto Flute, Harp, Bassoon, and String Trio* and the octet *For Brass*. These serial works, which he did not write for class, but instead of his own volition, exhibit Young's early interest in using sustained tones. In 1957, he composed *Variations for Alto Flute, Harp, Bassoon, and String Trio* and the octet *For Brass* (Figure 1.6) The dynamics of a given score indicate the intensity and volume of a given measure or section of music and composers often use Italian terms such as *piano* ("soft") and *forte* ("loud") to direct the musician on the intended sound. Young inserted very soft sustained tones into the middle section of *For Brass* and, in the score, one can see his dynamics designations ranging from *pianissimo* ("softest," indicated by the "pp") to *piano pianissimo* (an even softer

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experimental music could only succeed with audiences if couched in terms of serious classical music. For example, he preferred that most performances of his event scores, no matter how much freedom given to the performer, take place in a concert hall. Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[67] For Cage's interest in Zen Buddhism, see Daisetz Teitaro (D.T.) Suzuki, *An Introduction to Zen Buddhism*, 2nd Edition (London: Rider and Company, 1957). The main difference between the aesthetic theories of Cage and Young in the late 1950s and early 1960s revolved around the idea of input and output. Cage wanted to take in or receive as many individual sounds as possible, and he thus often utilized quiet spaces and long periods of (non)silence. Young, on the other hand, used extreme amplification, repetition of tones, and constant drone in order to create an environment in which one could study sound over a long period of time. As he often said, he wanted to "get inside a sound" by using such means. One could think of these two differing conceptions of sound as Zen (Cage) versus Webernian Romanticism (Young). Douglas Kahn, interview with the author, September 30, 2004.

degree of "softest," indicated by the "ppp") and beyond. In a similar piece from 1957, *For Guitar*, Young furthered use of long tones, but used them so that they faded into silences.[68] The use of sustained tones was not entirely new in Western music; however, Young's achievement lies in his decision to use them as the primary sonic material of his works rather than as the underlying harmony for a melody.

Young completed his degree in music at UCLA in 1958 and, having received a Woodrow Wilson National Foundation Fellowship in Music, entered graduate school at the University of California at Berkeley that same year.[69] His serial works from 1956 and 1957 set the stage for his major composition written at Berkeley, *Trio for Strings*, his first fully formed work composed completely of sustained tones (Figure 1.7).

As an undergraduate at UCLA, Young minored in ethnomusicology, then a budding field in the study of non-Western music. As Young recalls, UCLA possessed a sizeable collection of ethnic music records, and it was there that he first heard Asian styles of music, including Japanese *gagaku*, the ancient Imperial Court music that utilized extremely slow tempi.[70] Around 1956 or 1957, Young also first heard what would prove a seminal record for him: Ali Akbar Khan's 1955 recording of *Ragas Sindh Bhairavi* on Angel Records, the first full-length raga ever recorded in the United States.[71] This work,

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[68] Webber, "La Monte Young Meets Mark Webber," 39.
[69] Duckworth, *Talking Music*, 210. Also see Young's list of awards and fellowships on his *curriculum vitae* at http://www.melafoundation.org.
[70] See Robert Garfias, *Gagaku: The Music and Dances of the Japanese Imperial Household* (New York: Theatre Arts Books, 1959) and *Music of a Thousand Autumns: The Tōgaku Style of Japanese Court Music* (Berkeley: University of California Press, 1975) for full discussions of *gagaku* and related music. Young and Garfias have known each other since their years at UCLA. See Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 27.
[71] See *Music of India*, performed by Ali Akbar Khan, Angel Records ANG 35283, 1955, LP.

to which Young often listened for many hours at a time, introduced the composer to the *tamboura*, a North Indian classical instrument that creates a constant drone.[72] In the context of his ethnomusicology studies, Young also investigated indigenous music from Africa, Korea, and Thailand, all of which contributed to his understanding of drone and repetitive music structures; he claims that his absorption with non-Western musical forms led him to integrate them into his own works.[73]

Many music historians cite Young's *Trio for Strings* (1958) as the first true Minimalist composition because it consists solely of sustained tones and silences. Musicologist Wim Mertens writes of the overtones created by the sustained tones of the violin, viola, and cello in this piece, stating, " . . . [The sustained tones] contribute to an overall sound spectrum, as a result of which the components have a different duration . . . the timbres are deliberately colorless and the slowly bowed tones are played without vibrato."[74] Young asserts that his own sense of vast space, distance, and time within California inspired him to write *Trio for Strings*.[75] At the time, Young was taking Seymour Shifrin's composition class, which also included notable composition students such as Riley, David del Tredici, Loren Rush, and Pauline Oliveros. Young considered *Trio for Strings* both a harmonic and a contrapuntal work because he assigned each tone points of entry and exit.[76] In this way, he felt that the work followed the given assignment. However, classmates performed *Trio for Strings* for the first time at Shifrin's

[72] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 26.
[73] *Ibid.*, 27.
[74] Mertens, *American Minimal Music,* 21.
[75] Webber, "La Monte Young Meets Mark Webber," 40.
[76] *Ibid.*, 39.

home because the thought of giving this audacious piece a recital at Berkeley made Shifrin too nervous.

Reports on the duration of the performance vary, but it was probably around forty-five minutes. It baffled Shifrin to the extent that he refused to give Young's piece a grade.[77] Young felt stifled artistically by the traditional attitudes of some of his teachers at Berkeley, recalling of the conservative environment, "There were some [professors] who were very open and said 'Well, if this is what you think is right, okay, work on it.' But there were others who would go so far as to say I was outright crazy . . . . "[78] Erring on the side of caution, Shifrin's denying *Trio* a grade and a public performance were actions tantamount to failing the piece if it had not been so innovative. Music historian Edward Strickland underlines the originality of the composition in writing, "Despite its serial underpinnings, nothing like Young's *Trio for Strings* had ever been heard in Western music . . . . It creates a musical landscape that seems not so much exotic as otherworldly."[79] *Trio for Strings* was also one of Young's earliest exercises with repetition, which became a central feature of his music in the 1960s, when the Theatre of Eternal Music used repetition of long notes to create what Young called a "drone state of mind." Young believed that listening to drone and sustained tones for an extended period of time created a higher level of consciousness through deep concentration on a constant sound source.[80] Judging by the meter of the score for *Trio*, Young intended it to be an

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[77] *Ibid.*, 39.
[78] Terry, "La Monte Young: Explorer of the L-O-N-G Tone," 18.
[79] Strickland, *Minimalism: Origins*, 121.
[80] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004. In his 1995 interview with Ian Nagoski, Young described the drone state of mind as "the idea that continuous frequencies that are in periodic relationships to each other produce a periodic composite waveform pattern, which is translated to the cerebral

extraordinarily slow piece.[81] As Strickland put it, "this music was going nowhere, and not fast."[82]

Throughout 1959, Young wrote several compositions that allowed for the use of time in an "indeterminate" manner, to use John Cage's term, which became well known among composers after 1959 with the publication of Cage's seminal essay "Indeterminacy" in Stockhausen's journal of experimental music, *Die Reihe*.[83] This is one of the few moments where Cage's and Young's compositional styles and processes seemed to converge as both composers followed the dictum to "let sounds be themselves" and incorporated improvisation into their works.

Having created a stir as an audacious young composer at Berkeley, Young was accepted into Stockhausen's International Summer Courses for New Music at the new school for music in Darmstadt in 1959. There Young first met Cage and David Tudor, the latter of whom served as a source for Young throughout the 1960s with his innovative piano performances. It was in Darmstadt that Young first heard a recording of Cage's *Concerto for Prepared Piano and Chamber Orchestra*, a work that impressed the young composer deeply.[84] Despite his forays into using long tones, Young still found himself engaged with the serial music of Webern, Pierre Boulez, and especially the electronic

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cortex pretty much as this periodic waveform pattern . . . . referred to as a . . . psychological state." See Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 25.

[81] To impart a sense of the timing, this is about a third slower than Beethoven's *Moonlight Sonata*.

[82] Strickland, *Minimalism: Origins,* 129.

[83] John Cage, "Lecture [Indeterminacy]," in *Die Reihe* 5, English ed. (1961). This essay was first published in the 1957 issue in English and then again in the 1959 version, in which all essays had been translated into English. This meant that readers of *Die Reihe* encountered "Indeterminacy" in its full state twice in the span of three years.

[84] Terry, "La Monte Young: Explorer of the L-O-N-G Tone," 18.

music pioneer Stockhausen. He considered Stockhausen's *Gesang der Jünglinge* (1955-1956) one of the best pieces he had ever heard.[85] According to Antokoletz, *Gesang der Jünglinge,* an electronic work that utilized tape recordings, showed Stockhausen incorporating "white noise" within noise bands and then filtering them so that it seemed like a single note surfaced.[86] Not surprisingly, Young took to this static musical piece quite easily.[87]

The Summer Courses for New Music had become something of a meeting place for the European musical avant-garde and in many ways had become the seat of Cage's European activity. Cage and other composers of the New York School visited regularly and lectured.[88] Artist and composer Nam June Paik attended the Summer Courses in 1957 and 1958, during which he became closely aligned with Cage.[89] In addition, musicians in Stockhausen's courses enjoyed the company of artists such as Emmett Williams, Wolf Vostell, and Benjamin Patterson in the Cologne atelier of Mary Bauermeister, Stockhausen's former partner, and the poets of the experimental Darmstadt Circle (Figure 1.8). Hannah Higgins, Fluxus historian and daughter of Fluxus artists Allison Knowles and Dick Higgins, asserts that the "open-ended classroom experience" provided by venues such as the Summer Courses, Cage's classes at the New School of Social

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[85] Duckworth, *Talking Music*, 232.
[86] Elliott Antokoletz, *Twentieth-Century Music*, 454.
[87] Despite his admiration for Stockhausen's composition, Young and the German composer butted heads several times over the course of the summer of 1959. Young's final piece was never performed in concert at summer's end because the sheet music disappeared, an act that Young attributes to Stockhausen, who found the work too incendiary. Young, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[88] Duckworth, *Talking Music*, 232.
[89] John G. Hanhardt, *The Worlds of Nam June Paik* (New York: Guggenheim Museum Publications, 2000), 20-21.

Research in New York, and Bauermeister's performance atelier ensured a more experimental rather than programmatic learning environment for the avant-garde, who regularly engaged in "comparatively non-hierarchical exchanges of information across national, disciplinary, and age boundaries . . . ."[90] Young, having found Berkeley a repressive learning environment, benefited from this kind of educational experience because it opened his mind to the idea of using multiple forms of media simultaneously.[91] In particular, interacting with composer David Tudor, whom Young refers to as "the greatest performer of new music who ever lived," and hearing about Cage's theories, inspired Young to create his best-known compositions, the conceptual pieces collectively entitled *Compositions 1960*.[92]

Fresh from his first real stint with chance music at Darmstadt, Young composed *Vision*, one of his lesser-known works, while back at Berkeley in 1959. This work was one of Young's early experiments with harnessing audience feedback as sound. In *Vision*, Young used a mere eleven sounds and spaced them at different intervals and durations over thirteen minutes, a relatively short piece for him. However, they were atypical sounds, such as the one he called "Herd of Elephants," in which a duo or trio of bassoons play a series of notes at rapid speed. Young often referred to this piece as his "assimilation of Darmstadt." Like *Trio for Strings*, the sounds of *Vision* had independent points of entry or exit and exist in a contrapuntal texture. However, Young has said that

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[90] Hannah Higgins, *Fluxus Experience* (Berkeley: University of California Press, 2002), 11.

[91] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[92] La Monte Young and Marian Zazeela, "La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri," interview by Frank J. Oteri, *NewMusicBox* 54 (August 2003): 47, accessed August 2005, http://www.newmusicbox.org.

his choosing sounds and durations by chance derived directly from the theories of Cage.[93] Later, Young fully fleshed out his improvisation techniques to reflect those of free jazz and Hindustani music, both of which use chance placement of set musical elements.[94] However, at this point in his career, Young chose the parameters of the sounds and in the performances more randomly, or, more accurately, often avoided making the choice at all. Instead, by giving the conductor and musicians the agency to determine which sounds occurred when they wished in the span of the composition, Young made the work a score for improvisation. During performances of *Vision* that he conducted, Young often turned out all lights and placed the musicians throughout the auditorium, including in the audience, which tended to shock the audience members, who then contributed their own noise unintentionally.[95] These incidental noises made by the audience constituted another chance element of the composition.

Ironically, the title of *Vision* refers to the sense of sight, which Young completely cut off in performance. It also implies an action beyond listening, rare for a musical composition; "vision," however, also suggests a mystical prophetic experience, which Young later explored by his idea of fostering a "drone state of mind" with the Theatre of Eternal Music. Although he had received accolades in Europe, by the time *Vision* was first performed live, Young had become accustomed to harsh criticism from West Coast composers and audiences alike. At Berkeley, Young felt as if only his friends Riley, Johnson, and Jennings truly understood his intentions. Young had admired the working relationship of Schoenberg, Berg, and Webern and sought to foster such friendships,

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[93] Duckworth, *Talking Music*, 233.
[94] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[95] Kostelanetz, *Theatre of Mixed Means*, 192-194.

based on collaboration, with Riley, Johnson, and Jennings.[96] He has also stated that, to his knowledge, nobody else was producing these kinds of visual mixed media events that used music in such an aggressively performative and actively confrontational manner.[97] Thus, Young began to use his protesting audiences not against their will, but to their surprise. In 1966, Young recalled of his late 1950s works,

> Some of the pieces of this period, then, were specifically related to the social situation. In one [performance of *Vision*], someone announced the duration and told the audience that the lights would be out for the entire composition and that was all. Sure enough, plenty of people tore up their programs, and a few made other noises. Everybody thought I had programmed these events into the composition, but I hadn't.[98]

Nevertheless, Young was not shy about making suggestions to performers. His many scores sent to Tudor, now archived at the Getty Research Institute, intimate that he often had more ideas for performances than he had time or musicians to realize himself.

Young also received some recognition when the choreographer Merce Cunningham began using *Vision* in conjunction with his dance company's performances. The audience's newfound interest in the work under Cunningham's direction taught Young one of his first lessons about presenting mixed-media events: that visual elements hold an audience. Young has stated, "I've noticed that a much greater part of the world is visually oriented and more capable of concentrating on visual stimuli than aural. Only a small percentage [of the audience members] have learned how to concentrate on sound."[99] The idea of intense concentration on sound affected Young deeply, and he

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[96] Young and Zazeela, "La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri," interview, 8.
[97] Strickland, *Minimalism: Origins*, 129. Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[98] Kostelanetz, *Theatre of Mixed Means,* 194.
[99] *Ibid.,* 194.

began seeking to differentiate himself from Cage after 1959 by concentrating on a minimal number of sounds in his compositions.

The Event Scores: Compositions from 1960 and 1961

The year 1960 brought several artistic opportunities to Young, making it a banner year for the twenty-five year old composer. Young's first major composition of 1960 and the one first described in this chapter, *Poem for Chairs, Tables, Benches, Etc. or Other Sound Sources*, found him extending the idea of creating unconventional sounds as a chance operation within a classical concert setting.[100] This composition dictated that

[100] The David Tudor Papers at the Getty Research Institute represents what is likely the most complete collection of Young's scores available because the young composer sent them to Tudor in the hopes that he would perform his work. The typed score for *Poem for Chairs, Tables, Benches, Etc., or Other Sound Sources* from the Tudor Papers reads as follows with some handwritten notes from Young:
"Etc. in the title means anything that can be dragged across the floor.

The chairs, etc. are to be pushed and dragged around on the floor, fast or slow, loud or soft, taking up much or little space, upside down or on the sides or right side up. Chairs without metal, etc. on the bottoms of their legs as a rule produce more different kinds of sounds.

Any sort of floor surface may be used and the sounds may come from any part of the room which holds the audience or outside of it. The sounds may also move in and out of the room and travel long distances away (up and down halls, etc.). [Hand written footnote: Also, the performers may be encouraged to go directly into the audience (up and down the rows – actually involving the spectators) and entirely outside the building if they like.]

Most of the touch necessary to produce the sounds is to be left up to the performers or the director, except to say that once the sound is begun the performers should not try to introduce new starts and stops before the sound is finished (although naturally the unevenness of floor surfaces, etc. will cause a certain amount of unspecified stopping and starting within the determined duration of the event. Percussive effects should not be used.

The structure of the composition may be used for any other sound sources [Hand written note: Any other kinds of events besides sounds may be used – events involving other senses: sight, smell, touch, taste, and any of the others, most of which are different for each person and vary from time to time], especially: squeaks, soft sounds and the sounds from Vision. Any sounds may be combined with each other, including sounds from the version for chairs, tables, benches, etc.

As many sound sources as there are events may be used in a version, or any number less than the determined number of events, e.g., if there are seven events, all seven could be different or the same, but if only one sound source is used and if some of the events overlap, it will be naturally necessary to have one or more duplicates of the one sound source, so that the various sounds may enter and end independently.

If the sounds from Vision are employed their usage could be expanded, i.e. sounds notated for a specific instrument, such as bassoon, could also be executed on other wind instruments, and it would naturally not be necessary to avoid using any sound more than once.

If sounds are used which cannot be sustained for the determined duration of the events, they may be repeated at irregular intervals for the specified duration. The irregular intervals of repetition may be determined in any manner.

Structure and Construction Procedures:
The composition may be any length, including no length. Any number of events (0 being considered a number) may be used, each with an individual point of entry and termination. The number of events will be limited by the number of performers available. All of the above considerations are to be determined by chance in the following manner.

Length of Composition:
Decide what size units (1/4 seconds, minutes, hours, etc.) will be used to measure the time available. This could be worked out by the same system of units used for measuring the length of the composition (see below). Turn by chance to a page of the random digit book and take the first number from the left hand corner of the page which falls within the time available for the composition. This number will be the length of the composition measured in units the size of which was originally decided. That is to say, if the unit of measure is ¼ seconds and the number drawn is 1034, the length of the composition will be 1034 4ths of seconds. If much time is available and the number found is short (perhaps only a 4^{th} of a second, etc.), several versions of the composition may be played, each with a suitable amount of time between it and the version following, although it is by no means necessary to have more than one version, no matter how short, within the available time.

Having thus determined the length of the composition, measure it in units according to the following plan:

Determined Duration of Composition	Unit of Measurement to be Used
Between 10 sec. & 20 min.	4ths of seconds
Between 20 mins. & 2 hours	Halves of seconds
Between 2 hours & 12 hours	Seconds

If the length of the composition is more than one day it will probably be more convenient to measure it in slightly larger units. For instance, if the composition were 10 days long, one possibility would be to measure it in minutes. If the length of the composition is less than 10 seconds, the director may measure it in units which are as small as he thinks are practical.

Number of Events:
The number of events to be used is also to be determined by opening the random digit book by chance to a page and taking the first number in the left column. However, first write the numbers 1, 2, 3, 3, and 5 each on a separate small piece of paper and shake them up in a hat. Draw one out. If it is number 1 use only the first digit in the number. If it is number 2 use the first two digits, if it is number 5 use all five digits of the number, etc.

This number of events will be limited by the number of performers at hand. For instance, if the number of events to be used is 1406 and there are five performers available, it may perhaps only be possible to use eleven events.

Duration of events:
To determine the durations of the various events, again select a page by chance from the random digit book and take in their order all of the numbers which fit within the length of the composition. Thus if the unit of measurement being used for the length of the composition is 4ths of seconds, the length of the composition is 1034 4ths of seconds, and the first number on the page is 332, it would mean that the event which receives this duration will be 332 4^{th}s of seconds long.

Points of Entry and Determination:
List the numbers found for the durations of events in the order in which they appeared on the page and then use the numbers from another randomly chosen page for the points of entry of the events, giving the duration first on the list to the first usable duration on the page being employed for points of entry. The numbers which indicate points of entry will be interpreted as follows: if the composition is 1034 4ths of seconds long, the duration of event is 332 4ths of seconds, and the number under consideration on the page being used will begin on the 413^{th} 4^{th} of a second in the composition and will end on the 744^{th} 4^{th} of a second, thus lasting 332 4ths of seconds. Any point of entry which would make the duration of event under consideration last longer than the determined length of the piece should be passed over. Move on down the page being used for points of entry and termination until a number is found which does allow the sound to fit within the determined length.

Distribution of Sound Sources:

performers push, pull, or drag musical furniture (i.e. the piano bench) across the floor of the stage. The music, then, consisted of the sounds that resulted. With this work, Young virtually opened the entire schema to chance by taking the programmatic element out of the performance itself. Chance served not only as direction for the composition—for who could dictate exactly what "sound sources" a performer might find on a given stage?—but remained the crux of the performance as well. Despite the appearance of spontaneity, the text score for this piece is nothing if not detailed in its instructions, which extend to some fifteen hundred words. For example, the instructions for determining the duration of the piece indicate that it may range anywhere from a few seconds to several days. In many ways, Young may have used these compositions of indeterminate duration as

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The director of each performance may decide by any method which sound sources to use in the composition, but the assignment of each individual sound source to a duration should be by chance.

The Number of Events to be Used When the Number of Events Determined is Greater than the Number of Performers Available:
It will be possible in many cases to have each performer enact more than one event. The events with their durations and points of entry may be distributed among the available performers in whatever manner makes it possible to include the greatest amount of the determined number of events in the composition. However, each event should be included in the composition in the order that its duration appeared in the random digit book, and when a duration appears (after all of the performers available are enacting at least one event) with a point of entry which would require one more performer than is available (assuming the distribution of events among performers has been worked out to allow the greatest number of the determined number of events possible), that version of the composition is to be considered finished. That is to say, do not skip over the unusable duration and point of entry in order to find durations and points of entry which could be enacted by the available performers.

Measurement in Performance of Points of Entry and Durations:
Each performer should be given a small piece of paper with his entries, durations and terminations indicated in relation to the starting point of the piece. Performers should use stop watches or watches with second hands. It should be pointed out, however, that 4ths of seconds etc. are used in the piece more for the working out of the structure, although this should not discourage the performers from trying to be reasonably accurate." Getty Research Institute, David Tudor Papers, Accession # 980039, Box 14, Folder 4.

experiments for working out problems of audience reception and pushing the envelope of audience endurace. In other words, how much could they stand? How LONG could they tolerate this music? Notably, however, musicians tended to react favorably under the taxing condition of extreme duration. Riley wrote of performing part of *Vision*, "[I] had the indescribable feeling of experiencing space travel, just waiting around peacefully between events that were marked by long silences. I loved the way I felt during these *cracks in time* [emphasis in the original text]."[101] Importantly, Riley's notion of a performance presenting cracks in time runs counter to the intended use of duration. In an ideal setting, Young envisioned duration as a constant uninterrupted entity reminiscent of a Bergsonian notion of time.[102] Therefore, around 1962, he began using the term "eternal music" to describe his work, indicating an infinite sense of time. While the "cracks in time" from 1959 and 1960 remain an essential part of Young's oeuvre, they also represent an aberration with regards to eternal time.

In the summer of 1960, Young branched further into crossover media by serving, along with Riley, as a lecturer and music director at choreographer Ann Halprin's Dance Workshop in Kentfield, California, the West Coast center of avant-garde modern dance. In the late 1950s, Halprin pioneered a style of static modern dance in which dancers repeated small, quick, and mundane bodily movements.[103] It was to Halprin's dancers

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[101] Terry Riley, "The Trinity of Eternal Music," in *Sound and Light: La Monte Young, Marian Zazeela*, by William Duckworth and Richard Fleming (Lewisburg, PA: Bucknell University Press, 1996), 98.

[102] For Bergson's philosophy, see Henri Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness* (Hoboken, NJ: Taylor and Francis, 2014).

[103] Michael Rush, *New Media in Late 20th-Century Art* (London: Thames and Hudson, 1999), 48. Rush notes that Halprin served as a major source for Bruce Nauman's video works in which he records himself dancing in repetitive motions. Nauman was also

that Young first delivered his *Lecture 1960*, a landmark conceptual piece loosely based on Cage's essay "Indeterminacy."[104] In the summer of 1960, Young had been reading as much Japanese haiku poetry as he could find, as well as the *Tao Te Ching*, Lao Tzu's foundational Taoist text from the sixth century B.C.E. The *Tao Te Ching*, a precursor to the later philosophy of Zen Buddhism, served as an important source for much of Young's composing in 1960, because many of its tenets focused on singular events, ideas of spatial organization, the interconnectedness of activities, and the art of concentration. The first section of chapter fourteen of the *Tao Te Ching* states,

> Look, it cannot be seen – it is beyond form.
> Listen, it cannot be heard – it is beyond sound.
> Grasp, it cannot be held – it is intangible.
> These three are indefinable;
> Therefore, they are joined in one.[105]

The idea of interconnectedness and multisensory experience of the cosmos, embodied in texts such as this, encouraged Young to pare down his ideas into singular events.

At the same time, working with Halprin's workshop afforded Young the opportunity to explore the concept of theatre. *Lecture 1960* consists of twenty-five sections that, according to the Young, could be read in any order. He has written of *Lecture 1960*, "The order and selection can be determined by chance, thereby bringing about new relationships between parts and consequently new meanings."[106] In addition, Young continued adding sections to the lecture throughout 1960, and it thus included

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deeply engaged with Minimalist music and its foundation of using extended periods of time.

[104] Kahn, "The Latest: Fluxus and Music," 103.

[105] Lao-Tzu, *Tao Te Ching*, Trans. Gia-Fu Feng and Jane English (New York: Vintage Books, 1997), n.p.

[106] Memorandum by La Monte Young, "unpublished introduction to Lecture 1960," 2002, courtesy of the artist (copyright La Monte Young, 2002), n.p.

references to several of his *Compositions 1960*, written later in the year. *Lecture 1960* is simultaneously anecdotal and haiku-like in the lack of narrative resolution at the end of many of the sections. One section simply reads, "Every word I say contributes to the lie of art."[107] *Lecture 1960* also includes some of Young's sly humor, another element of the *Compositions 1960*. For example, one portion of the lecture states the following anecdote:

> When Karlheinz Stockhausen gave a lecture at the University in Berkeley, he talked of some work he had been doing with television. He had said he tried to let the new medium, the television machine, inspire the form of the composition. At this point someone in the audience said to his neighbor, "But I thought music was supposed to be for people."[108]

Many of the anecdotes refer to conversations held between Young and his different composer friends as well as the poet Diane Wakoski, his then-partner, wherein the participants might expound upon their theories of sound. As another section of *Lecture 1960* explains,

> When I told Richard Brautigan that I liked to get inside of sounds, he said that he didn't really understand what I meant because he didn't visualize a shape when he heard a sound, and he imagined that one must conceive of a shape if he is to speak of getting inside of something. Then he asked, "Is it like being alone?" I said, "Yes."[109]

Lecture 1960 not only gives an intimate snapshot view of avant-garde composers at the time, but also shows Young experimenting with text itself, due in no small part to his sharing ideas on writing with Wakoski. Just as an audience member might "get inside" sounds presented at one of Young's concerts, the lecture audience also witnessed an indeterminate sound event unique for its improvised order of text. It was also a visual

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[107] La Monte Young, "Lecture 1960," *Happenings and Other Acts*, ed. Mariellen R. Sandford (New York: Routledge Press, 1995), 76.
[108] Young, "Lecture 1960," 77.
[109] *Ibid.*, 80.

piece in that an audience either watched Young read the lecture, or a reader looked at the text and could decide the order in which the parts should have been read. This concept of a piece of text becoming an art object would come to fruition in other of Young's compositions of 1960 and 1961, as well as in the book that he organized and edited, *An Anthology of chance operations, concept art, anti art, indeterminacy, plans of action, diagrams, music, dance constructions, improvisation, meaningless work, natural disasters, compositions, mathematics, essays, poetry* (1963), often referred to more simply as *An Anthology*.

Other activities from Young's summer with Halprin's class furthered his interest in crossover media and the use of prolonged sounds in a visual setting. In *2 Sounds* (1960), Young reduced the number of sounds to two – the sounds made by tin cans pushed across glass and drumsticks scraped over a gong – made constantly over the course of about fifteen minutes. Most importantly in this moment, he added contact microphones to the glass and gong, amplifying the cacophony to a shockingly high decibel level. This resulted in the perceptual effect of stretched time. Fifteen minutes felt like much longer to the listener. Young and Riley performed this work at Kentfield with glass and gong in order to create a recording of the cacophonous, continuous, percussive, and amplified scraping sound for a fifteen-minute tape, which they then played during one of Halprin's dancers' performances. Kahn quotes artist Henry Flynt saying of this work, "When the tape ends after fifteen minutes, the ensuing silence comes as a shock: silence has somehow been charged."[110] In other words, one became so accustomed to the

[110] Kahn, *Noise, Water, Meat*, 228.

fifteen-minute aural assault that the silence that followed seemed like a completely new entity.

It was through the work at Halprin's studio that Young came to identify the goal of producing music with long tones in order to "get inside a sound." In *Lecture 1960*, he writes,

> If we are really interested in learning about sounds, it seems to me that we should allow the sounds to be sounds instead of trying to force them to do things that are mainly pertinent to human existence . . . . When the sounds are very long, as many of those we made at Ann Halprin's were, it can be easier to get inside of them. Sometimes when I was making a long sound, I began to notice that I was looking at the dancers and the room from inside the sound instead of hearing the sound from some position in the room . . . . Once you enter a new world, of a sound . . . you will never really leave it.[111]

This use of long and loud sounds within the visual event of a dance performance brought about several concepts important to Young's ideas of getting inside of sounds. First, Young used the amplification and length of the sound to create a *space made of sound* in which the dance occurs. The sound no longer had a specific location; it was all-enveloping. Secondly, the seamless repetition of the same loud sound developed a temporal continuity much different from the instantaneous groupings of various noises as espoused by Cage.

Through the staging of events, Young encountered several artists now known for early performance work. For example, he met the young sculptor Walter De Maria in the Bay Area sometime around 1957 or 1958. According to De Maria, he and Young staged three Happenings at California schools in the late 1950s.[112] Happenings, or "live"

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[111] Young, "Lecture 1960," 79.
[112] Walter De Maria, Interview by Paul Cummings, October 4, 1972, Archives of American Art / Smithsonian Institution, n.p.

experimental group events that relied on the interaction of the performers and audience, had emerged as a new form of expression that de-centered the ego of the single artist while bridging what Robert Rauschenberg called the "gap between art and life" and high and low art forms.[113] De Maria described the Bay Area Happenings as coming out of their knowledge of Cagean sound theory and also Happenings in New York. Once in New York, De Maria met Robert Whitman, who had attended Cage's class at the New School for Social Research and was engaged with the "Happenings people"—artists such as Jim Dine, Red Grooms, Claes Oldenburg, Allan Kaprow, and George Segal—from street Happenings in New York and New Jersey.[114]

In 1972 De Maria described the Happenings with Young as occurring in the settings of three universities in the Bay Area: Stanford, Berkeley, and the California School of Fine Arts.[115] Referring to the events as "meditative Happenings," De Maria claimed that in one afternoon, the two of them sat in the courtyard of the Architecture building at Berkeley and gave people small mirrors and oranges to peel.[116] In the process

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[113] Rauschenberg stated, "Painting relates to both art and life. Neither can be made. (I try to act in that gap between the two.)" in Robert Rauschenberg, "Artist's Statement," in *Sixteen Americans*, ed. Dorothy Miller (New York: Museum of Modern Art, 1959), 58. Many art historians cite the anti-art nature of the work in question. I prefer the view espoused by Simon Shaw-Miller and Douglas Kahn, among others, that Happenings and Fluxus did not merely embody the lowest common denominator of the arts, but instead, celebrated the details in everyday life, which had been unconsidered, through careful contemplation of the smallest units of human existence, including humor, food, water, and the common noises made and repeated by household objects.

[114] Walter De Maria, Interview by Paul Cummings, October 4, 1972, Archives of American Art, Smithsonian Institution, n.p.

[115] *Ibid.*, n.p.

[116] *Ibid.*, n.p. De Maria elaborated on the Happening, saying, " . . . It was like there you were and there were a certain number of objects to contemplate, that kind of thing. There were very few elements, things with very few elements, very long periods of silence going on for a long period of time, not a lot of acting, not a lot of elements, not a lot of expression . . . . The idea of interaction is very interesting . . . the idea that maybe the art

of the Happening, the two artists not only engaged the audience, but they gave specific directions of what to do with a very limited number of objects. Furthering the idea that some Happenings possessed qualities reminiscent of Asian philosophy, Kaprow observed in *Art News* magazine in May 1961 that the Happenings executed by musicians and writers tended to be "sparsely abstract, almost Zen-like rituals."[117]

In 1960 Young won an Alfred Hertz Memorial Traveling Scholarship from Berkeley and went to New York to study electronic music under Richard Maxfield at the New School for Social Research.[118] This visit became a permanent move for Young. Through his notoriety in California, Young had already met several artists and performers living in New York, including De Maria, Flynt, Robert Morris, and Simone Forti Morris (Morris' wife, a dancer).[119] Almost immediately after arriving in New York, Young was introduced to Yoko Ono and invited to initiate a concert series, known later as the Chambers Street Concert Series, at her loft.

When Young arrived in New York in the summer of 1960, the Fluxus movement did not yet exist, although its performative aspect had already been inspired by the Happenings of the late 1950s. The Happening had originated as a result of collaboration

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world is going to express itself with the spectator totally engaged, you know, with the actor just a few feet from you, with the sound all around you . . . . the idea of being absolutely part of it, that was the important part of the Happenings . . . ".

[117] Allan Kaprow, "'Happenings' in the New York Art Scene," *Art News* (May 1961): 38. Interestingly, many Happenings and Fluxus works make use of fruit as a musical instrument or sound source. For example, Kaprow's own *Eighteen Happenings in Six Parts* included a section where a performer squeezed fresh oranges into juice as part of an orchestra.

[118] Young states that administrators in the graduate music program at UC Berkeley, so confounded by his compositional practice that they felt that he was an intellectual danger to the foundations of the program, essentially gave him the award to keep him out of California and away from susceptible students. Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[119] Webber, "La Monte Young Meets Mark Webber," 40.

among artists such as Kaprow, Segal, Roy Lichtenstein, Robert Watts, Lucas Samaras, and Robert Whitman while involved in the experimental art program at Rutgers University in New Jersey and in John Cage's experimental music classes at the New School for Social Research.[120] Painter Larry Poons, a sometime student in Cage's classes at the New School, became acquainted with the New York music scene through Cage and his neighbor La Monte Young.

Happenings, a term coined by Kaprow, differed from Fluxus in several respects. An evening of Happenings often advertised the occurrence of one or two performances, but several trained artists often took part, removing the emphasis on the single artist. Alternately, Fluxus events often consisted of long programs of up to twenty different performances that sometimes featured the solitary artist. In addition, Happenings often required complex staging for their holistic pseudo-theatrical performances, but Fluxus events eschewed staging and disregarded structure because its artists preferred a free-flowing range of activity and the experience of minutiae in a manner suggestive of Cage's theory of sound.[121] As Kaprow wrote of the temporal nature of Happenings, "To the extent that a [H]appening is not a commodity but a brief event … it may become *a*

[120] Joan Marter, "The Forgotten Legacy: Happenings, Pop Art, and Fluxus at Rutgers University," *Off Limits: Rutgers University and the Avant-Garde, 1957-1963*, ed. Joan Marter (New Brunswick: Rutgers University Press, 1999), 1-3.
[121] See Philip Auslander, "Fluxus Art-Amusement: The Music of the Future?," in *Contours of the Theatrical Avant-Garde: Performance and Textuality*, ed. James Harding (Ann Arbor: University of Michigan Press, 2000); Henry Flynt, "Mutations of the Vanguard: Pre-Fluxus, During Fluxus, Late Fluxus," in *Ubi Fluxus Ibi Motus, 1990-1962*, ed. Achille Bonito Oliva (Milan: Mazzotta, 1990); and Thomas Kellein and Jon Hendricks, *Fluxus* (London, UK: Thames and Hudson, 1995). For information on European Fluxus, see Juergen Becker and Wolf Vostell, *Happenings: Eine Dokumentation* (Hamburg, Germany: Rowohlt Verlag, 1965).

state of mind."[122] According to Brecht, a participant in both Happenings and Fluxus, George Maciunas's term "Fluxus" indicated "the smallest unit of a situation."[123] Like music, Fluxus is temporal in nature.

Young not only encouraged Fluxus sound events with his employment of individual sounds, but also through his use of what would soon be called the "event score" with his *Compositions 1960*. Brecht had invented the term "event score" by 1961: an "event" designated the smallest unit of a "situation" and the score was both the visual component of the event and the instruction for the sound. The score stipulated a series of directions for the performer to enact in order to create music in a theatrical event.[124] As Liz Kotz has written, event scores possessed a conceptual ambiguity because one could view them as both art objects in their own right or as "scripts for a performance or project or musical piece with is the 'real' art."[125] Brecht coined the term with the development of his own musical scores for works such as *Time-Table Music* (1959), *Drip Music* (1959-1962), and *Incidental Music* (1961), which also utilized the sound created by an event or the act of doing something (Figure 1.9).[126] Brecht once noted of his scores, "Music isn't just what you hear or what you listen to, but everything that happens . . . . Events are an extension of music."[127] Kahn has made the observation that Fluxus artists, such as Paik and Brecht, differed from Cage in the respect that they, like Young, isolated specific

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[122] Kaprow, "'Happenings' in the New York Art Scene," 62.
[123] Rush, *New Media in Late 20th-Century Art*, 24.
[124] Simon Shaw-Miller, "'Concerts of Everyday Living': Cage, Fluxus and Barthes, Interdisciplinarity and Inter-media Events," *Art History* 19, (March 1996): 9-10.
[125] Liz Kotz, "Post-Cagean Aesthetics and the 'Event' Score," *October* 95 (Winter 2001): 57.
[126] Shaw-Miller, "'Concerts of Everyday Living': Cage, Fluxus and Barthes, Interdisciplinarity and Inter-media Events," 9.
[127] Kotz, "Post-Cagean Aesthetics and the 'Event' Score," 72.

sounds, but also correlated them with a certain "object, task, performance, or concept."[128] According to Simon Shaw-Miller, Fluxus artists considered the smallest units of visual and sonic material and maintained a "micro view of artistic practice," whereby they avoided grand projects in favor of a "rigorous reconsideration of music's sonic materials."[129]

As a teaching assistant to Maxfield, Young met Fluxus founder George Maciunas during one of Maxfield's classes and their shared interests in music fostered a close friendship. Maciunas, a young Lithuanian immigrant, graphic designer, and art promoter, found himself at odds regarding what kind of work he wanted to exhibit in his art space, the AG Gallery. Young and others, such as Flynt, talked Maciunas into exhibiting their kind of art, which did not prove financially lucrative, but which they considered the most advanced at the time and a far cry from the more conservative paintings that Maciunas had initially exhibited. Young has said of Maciunas, "We had to drag him kicking and screaming into the twentieth century."[130] After letting go of his initial reservations about avant-garde art and music, Maciunas quickly found his niche as an organizer of events and, despite their musical differences, he often included Young's conceptual compositions within Fluxus events.[131] Early Fluxus had an experimental footing that, for

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[128] Kahn, *Noise, Water, Meat*, 226.
[129]Shaw-Miller, "'Concerts of Everyday Living': Cage, Fluxus and Barthes, Interdisciplinarity and Inter-media Events," 9. Shaw-Miller also concedes that Fluxus artists differed from Cage in their ideology on sound in that they were "sonic purists" while Cage was a "sonic pluralist" who accepted all manner of sound as usable material for the musician.
[130] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[131] *Ibid*. Young further explains the avant-garde's debt to Maciunas. He states that Maciunas was a very hard-working person, a talented graphic artist, and became the major printer of many artists' works through his affiliation with a printing house. In

some of the artists (and Maciunas at the very least), was also quite idealistic in its total freedom at times. To quote Fluxus poet Emmett Williams, who appropriated a Kennedy-era slogan from 1960 in one of his early works, "Don't let it be forgot / That there was once a spot / For one brief, shining moment / Called ~~Camelot~~ Fluxus."[132]

To understand Young's *Compositions 1960*, some of his best-known pieces, one might best look at them in the context of Fluxus performance and music. From 1958 to 1959, many of the practitioners of Happenings and "proto-Fluxus" activities, such as Kaprow, Brecht, and Dick Higgins found common ground as students of Cage's unconventional music classes at the New School for Social Research that he developed in order to bring the experimental composition techniques of the Darmstadt summer courses to the American avant-garde.[133] Before 1963, Proto-Fluxus events sought to encompass the entire range of the arts in performances of cross-pollinated media; they therefore included painting, drawing, theatre, dance, music, and poetry in myriad combinations that utilized several of the five human senses simultaneously. Artists such as Brecht and Higgins de-emphasized the boundaries between the differing media; they considered sound as important a form of artistic expression as painting. In his 1966 "Statement on Intermedia," Higgins coined the term "intermedia" to describe artistic activity that

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addition, Maciunas loved to organize festivals and other large events and, being quite a handyman, often literally built events up from the ground. Young remembers that Maciunas suffered from debilitating asthma, the only cure for which at the time was cortisone, a steroid, which may have accounted for some of Maciunas's bubbly personality and incessant activity.

[132] Auslander, "Fluxus Art-Amusement: The Music of the Future?," 166. For more on Maciunas's support of early Fluxus, see Thomas Kellein, *The Dream of Fluxus: George Maciunas, an Artist's Biography* (London: Edition Hansjörg Mayer, 2007).

[133] See Joan Marter, ed., *Off Limits: Rutgers University and the Avant-Garde, 1957-1963* (New Brunswick, NJ: Rutgers University Press, 1999), Mildred Glimcher, ed., *Happenings: New York, 1958-1963* (New York: Monacelli Press, 2012), and Kotz, "Post-Cagean Aesthetics and the 'Event' Score," 65.

occurred "between the media" and thus used multiple forms of media as a reaction to the multi-faceted nature of everyday life.[134] Once Maciunas began his fervent organizing of Fluxus events and concerts in 1962, intermedia events became even more pronounced because of the sheer numbers of artists and performers that he employed. However, in using unorthodox notation methods and unconventional musical "instruments," such as dripping water or beans tossed onto piano strings, the sonic output of such events was often indeterminable and, to use a term of Brecht's, incidental. I contend that Young's conceptual compositions from 1959 to 1961 served as the impetus for much of Fluxus artists' work with sound in performance.

Strong metaphysical and meditational currents run through much of Fluxus' musical endeavors, but Young was unique in his far-reaching embrace and actual practice of metaphysical philosophy. To position Young's works as Zen-styled meditations, one must frame his unorthodox conception of meditation. Much of Young's work has been connected to the Hindustani understanding that music connected people to the cosmos through both mathematic and spiritual principles. Young saw himself as mining the primordial character of humanity and a universal connectedness through sound and meditation; later in the 1960s, the Theatre of Eternal Music sought to connect to audiences spiritually via sound waves.[135] This abstract idea of a musically dominated cosmos, in which both music and the human soul seemed to reveal a sense of eternity through their intangibility, seemed to explain the mysterious phenomenon of humans gaining spiritual, emotional, and cosmic insight from sound.

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[134] Elizabeth Armstrong, "Fluxus and the Museum" *In the Spirit of Fluxus,* ed. Elizabeth Armstrong and Joan Rothfuss (Minneapolis: Walker Art Center, 1993), 14.
[135] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 31.

Ancient Indian philosophy, including early Buddhist and Vedic thought with which Young was familiar, took the idea of sound creating the cosmos further by suggesting that one could tap into a higher level of being through music when using sound as a form of meditation. Also concerned with this type of cosmic sound, Zen or Chan Buddhism was founded by the Indian Buddhist monk Bodhidharma in the fifth century C.E. Zen Buddhism became popularized within mainstream Western culture in the 1940s and 1950s via the writings of the Beat authors, including Jack Kerouac, Gary Snyder, Allen Ginsberg, and Gregory Corso.[136] For many of the Beat writers, and especially Kerouac, a modern person could achieve a Zen state of mind through listening to or playing jazz. Significantly in this context, Young began his career in music as a jazz saxophonist on the West Coast. By 1959, Allan Watts attempted to underscore the differences between American and Asian practices of Zen in his *Beat Zen, Square Zen, and Zen*, in which he pitted the Beatniks' notion of an unstructured "Beat Zen" in which anything goes against the highly regimented "Square Zen," where Westerners attempt to become Zen masters through rigorous meditation and practice.[137]

Young's recognition of the metaphysical capacity of time coordinates with both Zen and other Buddhist philosophy. In writing typical of the period, Buddhist scholar Lama Anagarika Govinda wrote in the popular journal *Main Currents* in 1970 that in

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[136] Alexandra Munroe, "Buddhism and the Neo-Avant-Garde: Cage Zen, Beat Zen, and Zen," in *The Third Mind: American Artists Contemplate Asia, 1860 - 1969* (New York: Guggenheim Museum, 2009), 199-215. This exhibition featured a *Dream House* installation by Young and Zazeela and Munroe's catalog features several excellent essays on Eastern philosophy in American art. See also Katsuki Sekida, *Zen Training: Methods and Philosophy* (New York / Tokyo: Weatherhill, 1975), K'uan Yü Lu, *Practical Buddhism* (London: Rider and Company, 1971), and Andrew Skilton, *A Concise History of Buddhism*, reprinted ed. (New York: Barnes & Noble, 2000). I thank Janice Leoshko for her recommendations on these sources.

[137] Alan Watts, *Beat Zen, Square Zen, and Zen* (San Francisco: City Lights Books, 1959).

advanced stages of meditation, one could experience what is conventionally thought to be "time" as "another dimension of consciousness."[138] Likewise, Govinda asserts that humans experience space not as a static entity, but through the movement of molecules in the "cosmic dance of the heavenly bodies," also called the "harmony of the spheres."[139] According to *Mahayana* Buddhist philosophy, a larger umbrella grouping of Buddhist doctrines from which Zen emerged, the conscious man craves an understanding of the infinite nature of space; and Zen Buddhism simplified this concept as man's meditation on the "no-thing-ness" of so-called empty space.[140] Because the medium of music possesses immaterial and abstract qualities, *Mahayana* Buddhist belief likened it to *dhyana*, the "profound space-experience of meditation."[141] In this context, the *Mahayana* used mathematics in music in a largely symbolic manner as an attempt to close the gap between infinite space and ordinary human consciousness.[142]

In the 1940s and 1950s, the Zen teacher Daisetz Teitaro (D.T.) Suzuki, teacher to avant-garde figures such as John Cage, simplified Zen philosophy into a three-fold entity. When faced with a *koan*, usually an anecdote of an old master or a question put forth by a

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[138] Lama Anagarika Govinda, "The Mystery of Time," *Main Currents* 27 (September / October 1970): 19.
[139] *Ibid.*, 19.
[140] *Mahayana* and *Theravada* (also called *Hinayana*) are the two major branches of Buddhism. *Theravada* first developed in South Asia and *Mahayana* grew later as a separate branch in the East Asian territories. Most scholars consider the *Theravada* branches the most orthodox of Buddhism in following the direct teachings or sutras of the historical Buddha. *Mahayana*, by contrast, is a heterodoxy of *Theravada* and accepts a wider variety of doctrines, such as Zen, Pure Land, and Tantric Buddhisms. For a basic introduction to Buddhism, see Skilton, *A Concise History of Buddhism*, and for a background on Tibetan Buddhism, see Robert Thurman, *Essential Tibetan Buddhism* (Edison, NJ: Castle Books, 1997).
[141] Lama Anagarika Govinda, "The Conceptions of Space in Ancient Buddhist Art and Thought," *Main Currents* 26 (January / February 1970): 79.
[142] Govinda, "The Conceptions of Space in Ancient Buddhist Art and Thought," 80.

teacher, the Zen Buddhist then engages in the practice of *zazen*, or meditation on that single point, in order to attain *satori*, or a state of expanded consciousness. According to Suzuki, *"Satori* may be defined as intuitive looking-into, in contradistinction to intellectual and logical understanding . . . *Satori* means the unfolding of a new world hitherto unperceived in the confusion of a dualistic mind."[143] Notably, in early Zen teaching, a person could achieve *satori* not only through meditation, but also through accidental concentration on repetitive mundane actions or incidental single events. According to Suzuki, "An inarticulate sound ... a blooming flower, or a trivial incident such as stumbling, is the condition or occasion that will open [one's] mind to *satori*."[144]

In considering the performance of his music as meditation, Young amalgamated meditational theory from *Vedic*, *Mahayan*, and Zen philosophy. As Young explains,

> Sound, music . . . is considered a form of yoga, the fifth form of yoga. And it can be practiced in such a way that it's a meditation . . . . Yogis practice a discipline . . . where they bring the energy up and listen to the sound inside their heads, the sound of the sixth and seventh chakras, and this is a preparatory exercise for finding a way out through the top of your head to meditate on the music of the spheres . . . .[145]

Although this explains the meditational aims for one of Young's performers, one may also consider Young's early works as meditation pieces suitable for creating an environment of expanded consciousness for the spectator. Most of Young's early compositions eschewed set musical parameters in favor of illogical improvised revelations important for the mere act of their performance.

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[143] Suzuki, *An Introduction to Zen Buddhism*, 88.
[144] *Ibid*., 92.
[145] Young and Zazeela, "La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri," interview, 2.

Most of the *Compositions 1960*, which Young started in May of 1960 and published in 1963 in *An Anthology*, double as text and conceptual object.[146] However, he completed only six of these before moving to New York City. Like the sections of *Lecture 1960*, many of which were written in tandem with the *Compositions 1960*, most of the works are brief, typed on white paper, and possesses language that evokes *koans* or haikus.[147] One could call these his "conceptual compositions" because the idea, rather than the effect, pertains to their text. Young has referred to these works as his biggest social statement and rebellion against the establishment of classical music. According to the artist, the restrictive academic setting at Berkeley inspired him to author works to be performed in a traditional concert setting, but with unsettling and undetermined musical results.[148] Unlike *Lecture 1960*, however, the compositions contained directions for the performers. In addition, Young removed traditional notational scoring from the set of works, excepting the one handwritten composition, *Composition 1960 #7*. This score on manuscript paper shows a B and F sharp in the harmonic interval of a perfect fifth, with Young's handwritten notation below: "to be held for a long time" (Figure 1.10).[149] He

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[146] Flynt, "Mutations of the Vanguard: Pre-Fluxus, During Fluxus, Late Fluxus," 105.
[147] *An Anthology of chance operations, concept art, anti art, indeterminacy, plans of action, diagrams, music, dance constructions, improvisation, meaningless work, natural disasters, compositions, mathematics, essays, poetry*, ed. La Monte Young and Jackson MacLow (New York: George Maciunas and Jackson MacLow, 1963), which Young and MacLow began compiling 1961 and printed with the help of Maciunas in 1963, contains all of these works.
[148] Young, interview with the author, New York City, March 15, 2004 and March 19, 2004. Young explained that he had a difficult time recruiting musicians to perform his works in California. By the time that he started writing the *Compositions 1960*, he had become exasperated with the lack of serious musicians interested in performing his work seriously. Thus, he turned to artists to dream up new ways of performing his works.
[149] La Monte Young, "Compositions," *An Anthology of chance operations, concept art, anti art, indeterminacy, plans of action, diagrams, music, dance constructions, improvisation, meaningless work, natural disasters, compositions, mathematics, essays,*

writes no further measures, but instead includes ties to indicate duration.[150] The ties, as indicated in the score, actually tie to nothing. In this way, the notational paradox presented in the score emulates the paradox of *koan*. Works such as *Composition 1960 #7* can be thought of as textual analogs to Young's sustained tones from compositions like *Trio for Strings*, since both required continuity of sound, or in some cases, an action. In addition, Young dedicated some of the works to collaborators and artists in his circle, such as *Piano Piece for Terry Riley #1*, *Piano Pieces for David Tudor #1*, *#2*, and *#3*, *Composition 1960 #10 to Bob Morris*, and *Compositions 1960 #13* and *#15 to Richard Huelsenbeck*, indicating a kind of homage system to those who inspired him.

Certain of the *Compositions 1960* have become canonical pieces by Young because they allowed for the broadest interpretation of their terms by the performer. If Young did not ask for audience participation, he implied the necessity of an audience for these theatrical events through their inherent visuality. John Cale, Young's band mate in the Theatre of Eternal Music, claimed that the instructional nature of Young's 1960 works created the requisite of a visual presence on stage—after all, a performer had to *do* something—and that such works were the "precursor to today's performance art."[151] Bearing in mind the four uniting principles of these event scores – improvisation of chance operations, sound created by action rather than instrument, lack of set duration, and audience involvement – these scores are very much minimalist because, as detailed

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poetry, ed. La Monte Young and Jackson MacLow (New York: George Maciunas and Jackson MacLow, 1963), n.p.

[150] *Ibid.*, n.p.

[151] Victor Bockris and John Cale, *What's Welsh for Zen?* (New York and London: Bloomsbury Publishing, 1999), 40.

by cellist Charles Curtis, a frequent collaborator with Young for several decades, they emphasize a theme of removal, especially in their published form in *An Anthology*.[152]

Almost anyone could perform the *Compositions 1960*; few of them dictated that the performers play an instrument in a traditional sense; in fact, few required the performer to play any instrument at all. Young explored the concept of the single line as a Zen-like musical act in *Composition 1960 #10 to Bob Morris*, which stated as its score, "Draw a straight line and follow it" (Figure 1.1).[153] Young thus gives a specific direction for an action ("draw a straight line") and then another direction for the subsequent action ("and follow it"). However, he provides no instruction for how or where the straight line should be drawn or how long it should be; nor did he require any specifics for the "following" of the line. Hence, it became a chance operation in that the composer set a guideline, but the outcome depended on the realization chosen by the performer. In addition, *Composition 1960 #10 to Bob Morris* demanded a visual action as a performance piece. Rather than calling for the performer to make a sound, Young relied on the incidental sound created by the act of drawing a line and following it to serve as the music of the piece.

Young, having performed this work by drawing a single line for an entire evening, has explained its particularly Zen-like genesis by stating,

> I felt that a line was one of the more sparse, singular expressions of oneness . . . . the line was interesting because it was continuous – it existed in time. A line is a potential of existing time. In graphs and scores one designates time as one

[152] Charles Curtis, "The Position of the Observer: Regarding the Compositions 1960," in *± 1961, Founding the Expanded Arts*, ed. Julia Robinson and Christian Xatrec (Madrid: Museo Nacional Centro de Arte Reina Sofía, 2013), 79.
[153] Young, "Compositions," n.p.

> dimension. Nonetheless, the actual drawing of the line did involve time, and it did involve a singular event – "Draw a straight line and follow it."[154]

Artistic interpretations of the composition's meaning have varied greatly. For example, Young dedicates the work to his friend, the sculptor Robert Morris, who was taking part in many dance performances with his wife Simone Forti Morris at the time. However, Young's Theatre of Eternal Music band mate Cale, who himself performed the work as a music student in London, claims that the composition was a "tribute" to Berkeley mathematician and composer Dennis Johnson, Young's close friend who "was instrumental in teaching La Monte about Einsteinian physics."[155] Later, however, other artists viewed the work differently. Fluxus artist Nam June Paik performed this composition several times in 1962 and 1963 at venues such as the Fluxus Internationale Festspiele Neuester Musik in Wiesbaden, Germany (Figures 1.11 and 1.12) under his own subtitle *Zen for Head*. In the two images presented, Paik performs the work twice on two different sheets of paper, indicating an indeterminate performance of drawing a straight line and following it. In these performances, Paik dunked his necktie, head, and hands into a bowl of tomato juice and ink and slowly pulled himself over thin lengths of paper laid on the floor, creating dark semi-linear marks.

By using the title *Zen for Head* and repeating the action several times, Paik concentrated on the meditative aspect of performance.[156] At the end, though, he had created a work on paper, a physical manifestation of this meditation (Figure 1.13). Fluxus artist Ben Vautier also performed *Composition 1960 #10 to Bob Morris* in a similar

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[154] Kostelanetz, *Theatre of Mixed Means*, 204.
[155] Bockris and Cale, *What's Welsh for Zen?*, 40.
[156] Fluxus artist Ben Vautier also performed *Composition 1960 #10 to Bob Morris* in a similar manner at a Fluxus event in Milan, Italy, in 1967.

manner at a Fluxus event in Milan, Italy, in 1967, suggesting that Paik's repeated performances of the work had created a visual rubric for concerts of the work. Ostensibly, then, this slow and rather uncomfortable-looking process is intended to put either Paik or his audience (or both) in a Zen state of mind; conversely, perhaps the final ink drawing acts as a conduit for Zen meditation. If one thinks of Young's composition itself as a conceptual text piece analogous to one of his sonic sustained tones, it does not take much to imagine Paik's line on paper as a visual equivalent to a long tone.

Another piece from the series, *Composition 1960 #9*, further explored the idiom of the single line and exists as a strictly visual work that could be considered an object in its own right (Figure 1.14). This object required no performance, only its contemplation. The composition consisted of a small envelope pasted onto the penultimate page of *An Anthology*. The envelope bore the words, "the enclosed score is right side up when the line is horizontal and slightly above center." Inside the envelope, the reader finds an index card printed with a single black horizontal line.[157] With this work, Young exploited the singular line concept not only by eliminating all instruction, but also through producing the end result *a priori*. He literally reduced the composition to its barest and most purely visual element: the almost single dimensional line on a two dimensional surface. According to Young, "The line on a card was my answer to Cage's graphic notations."[158] Although seemingly not related to sound, the work again connoted two of Young's recurring themes, the long tone and the simple meditation, signified by a long line.

[157] Young, "Compositions," n.p.
[158] Duckworth, *Talking Music*, 234.

Other works among the *Compositions 1960* demanded a visual presence on stage to create incidental sound through non-musical actions. Many of these same works called upon the audience for participation. For example, *Composition 1960 #2* gives the instruction:

> Build a fire in front of the audience . . . . After the fire is burning, the builder(s) may sit by and watch it for the duration of the composition; however, he (they) should not sit between the fire and the audience in order that its members will be able to see and enjoy the fire . . . . The composition may be of any duration / In the event that the performance is broadcast, the microphone may be brought up close to the fire.[159]

Here, Young makes the performance a reflexive act between musician/fire-builder and audience by demanding the passive participation by the audience, which needed to "see and enjoy" the visual product conjured on the stage. Young signaled the use of incidental sound made by the fire, however inaudible, by instructing the musician/fire-builder to amplify it in the event of a televised or radio audience. With this piece, one finds an example of a composition whose action creates a quiet meditative environment for the audience. For example, Brecht performed *Composition 1960 #2* at a Fluxus concert in New York in 1964 (Figure 1.15, sequence of images by Peter Moore). During this realization of the piece, he concentrated on constructing a small tower of matches on top of a glass resting on a plate, which in turn sat on a piece of cloth on top of a stool in front of the artist.[160] Brecht then turned out the auditorium lights and lit the matches, causing a bright but short-lived fire. The music then consisted of the sounds made by the igniting and burning matches; what is more, the construction of the tower could be likened to the Zen monk's banal daily tasks, which could act as meditative conduits to *satori*.

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[159] Young, "Compositions," n.p.
[160] Michael Nyman, *Experimental Music: Cage and Beyond*, Second Edition (Cambridge: Cambridge University Press, 1999), 84-85.

The musical effect of the fire piece -- an indeterminate sound made by barely sonorous material that generated a quietly meditative atmosphere -- occurred in others of Young's 1960 works. In *Composition 1960 #5*, Young directed the performer to "Turn a butterfly (or any number of butterflies) loose in the performance area. / When the composition is over, be sure to allow the butterfly to fly away outside."[161] Focusing on the issue of time, Young amended the end of the composition to allow that one could consider the work finished when the last butterfly flew away; one could have opened doors and windows to facilitate this action in the case of unlimited time in the concert hall.[162] Again, Young set up the possibility for an unprecedented visual event in a concert hall: the sight of a butterfly occupying not only the musician's physical space, but also his or her role as sound-maker. A section from Young's *Lecture 1960* described his understanding of the butterfly's musical role in his piece. He wrote that the director of the noon concert series at Berkeley rejected his proposition to hold performances of *Compositions 1960 #2* and *#5* (the fire piece and the butterfly piece). The director's refusal of the idea shocked Young, particularly in the rejection of the less hazardous butterfly piece. Young's colleagues believed that the director banned the butterfly piece on the grounds that it was not music. Still, Young asserted,

> . . . I felt certain the butterfly made sounds, not only with the motion of its wings, but also with the functioning of its body and that unless one was going to dictate how loud or soft the sounds had to be before they could be allowed into the realms of music that the butterfly piece was music . . . . "[163]

Here, Young's interest in Cagean non-silence re-emerged; however, Young takes the idea a step further in the imagination of his reader when he implies that a butterfly

[161] Young, "Compositions," n.p.
[162] *Ibid.*, n.p.
[163] Young, "Lecture 1960," 74.

can be both performer and instrument. Furthermore, in order to hear the music made by the butterfly, a listener would need to both quiet the mind and concentrate on the practically inaudible performance as one would in meditation.

Alternately, Young's *Piano Piece for David Tudor #1*, also included with the *Compositions 1960*, called for the performer to attempt to feed a bale of hay and a bucket of water to a piano and the music resulted from these repeated attempts (Figure 1.16). The actions used to nourish the piano, a seemingly absurd and futile activity that also evokes the idea of the *koan*, might be considered a precursor to a drone state of mind through their focus on the singular event. Young loved this idea and thought his composition was hilariously funny.[164] Tudor was no stranger to avant-garde performance, having been the first to perform Cage's *4'33"* and a regular performer of radical work at the Darmstadt Summer Courses. Young wrote to Tudor repeatedly in 1959 and 1960 regarding his new work, and Tudor was among the first to receive copies of the *Compositions 1960*. Echoing the manner in which Tudor had performed *4'33"*, Young's *Piano Piece for David Tudor #2* states,

> Open the keyboard cover without making, from the operation, any sound that is audible to you. Try as many times as you like. The piece is over either when you succeed or when you decide to stop trying. It is not necessary to explain to the audience. Simply do what you do and, when the piece is over, indicate it in a customary way.[165]

In these pieces, the appeal of concentrating on a single action over a period of time reflects Young's interest in fostering a meditational atmosphere that is based on both ritual and joy.

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[164] Young and Zazeela, "La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri," interview, 47.
[165] Young, "Compositions," n.p.

The issue of theatrical performance becomes paramount in the *Compositions 1960*. Not only did Young invoke the audience specifically in works such as *Compositions 1960 #2, #3, #4,* and *#6*, but he often required that the musicians complete tasks both inside and outside the realm of everyday behavior on a stage. For example, in *Composition 1960 #13 to Richard Huelsenbeck*, Young simply asserted, "The performer should prepare any composition and then perform it as well as he can."[166] Invoking the sense of hearing within an abstract visual work, Young's partner Marian Zazeela created an ink on paper drawing consisting of a densely formed abstract design in which she embedded the word "Listen" (Figure 1.17). As Zazeela has stated, she considers the drawing a realization of the musical composition not only because she fulfilled its requirements by rendering a meticulously detailed image, but also because Young's open-ended performance aesthetic would allow for the visual depiction of a musical composition.[167] Because Zazeela considered this kind of drawing a "votive object" that gives the audience a point of concentration, she has stated, "The process of looking at or concentrating on a visual symmetrical configuration does bring the mind to a state of quietude."[168] In this way, the performance of this work is like a mantra. Of course, making a drawing in a private setting is not a typical action for either a musical event or a theatre event. Seeing such acts as similar to the Zen concept of achieving *satori* through the accident of a single occasion, Young attributed this kind of score to his interest in the singular event and often referred to his *Compositions 1960* as embodying the "Theatre of

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[166] *Ibid.*, n.p.
[167] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[168] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 30.

the Singular Event."[169] The appeal of concentrating on a single action over a period of time came from his meditation-based Taoist background in California, though the meditational aspect also seems Zen-like.[170] Young has stated, however, that he considered many of his works from the 1960 to 1961 period to be both theatre and music pieces with the understanding that the two categories continuously overlapped.[171]

At the same time, the singular event could have embodied a repetition of acts. Young's *X [Any Integer] for Henry Flynt*, also a composition from 1960, asked that a performer "repeat a loud, heavy sound every one to two seconds as uniformly and as regularly as possible for a long period of time."[172] The "X" or "integer" was the number of strokes that the performer made, such that the performer determined the integer before the performance and then repeated the sounds that number of times.[173] Unlike some of Young's other works from 1960, *X [Any Integer] for Henry Flynt* demanded both mental and physical strength from the performer, who would aim for unwavering precision in performance. Cale, for example, studied Young's works under the auspices of having to perform *X [Any Integer] for Henry Flynt* as his final summer project at Goldsmith's Teacher's College in London in 1963. Cale explained,

> It was clear that each piece in the 1960 series had a point of departure that embraced more than just performance. *X for Henry Flynt* . . . was about accuracy and human fallibility. X was the symbol for any chosen number of events to be repeated with hyper-precision with exactly the same distance between each of them.[174]

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[169] Kostelanetz, *Theatre of Mixed Means*, 214.
[170] *Ibid.*, 205.
[171] *Ibid.*, 203.
[172] Dave Smith, "Following a Straight Line: La Monte Young." *Contact*, Volume 18 (1977-1978): 4. This work is sometimes called *Arabic Numeral (Any Integer)* as well. See Duckworth, *Talking Music*, 238-239.
[173] Duckworth, *Talking Music*, 239.
[174] Bockris and Cale, *What's Welsh for Zen?*, 40.

Cale further described the scene at his summer concert in 1963. Other students formed a fake funeral procession with a "corpse" on top of trashcan lids. The "pallbearers" at this event then marched in strict time to Cale's playing of *X [Any Integer] for Henry Flynt* on piano, at which Cale kneeled on a pillow and rhythmically banged the keys with his elbows. Protesting students attempted to pull the piano away from Cale, but the composer Cornelius Cardew, who had introduced the works to Cale, ran onstage and quickly pulled Cale and the pillow back to the piano, helping him maintain tempo. According to Cale, " . . . The piece was neither understood nor appreciated by its audience, particularly the faculty . . . who saw it, I think, as essentially subversive of the overall intentions of Goldsmiths."[175] It was around this time that individuals both inside and outside of academia began to witness more live performances of Young's aggressively untraditional work as realized by his new entourage of supporters.

Young's entire compositional output of 1961 was determined by mantra-like repetition.[176] Having developed a special affinity for both the concept of the singular

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[175] *Ibid.*, 40.

[176] The one exception is a work from Dec. 23, 1961 titled *Death Chant*, which Young wrote as a dirge for Jackson MacLow's and Iris Lesak's newborn daughter. The score reads on the first page, "Received on the death of Jackson and Iris's baby Gwendolyn Malka MacLow. B. Dec. 19, 61; d. Dec. 22, 61. To be repeated many times or ad infinitum." The second page continues, "Any of the above may be played on carillon or large bells. If carillon, use the pitches [musical notation here]. If bells, use any low pitches with the proper interval relationships. The carillonist or bell ringer should find the best way to produce the percussive sound for each performance situation. Slower tempos may be used, especially in the case of the bells. The first measure [musical notation] may be used as an ending [musical notation]." I was not allowed to photocopy this particular score in order to study the notation used, but even as a funereal piece, Young employs the mode of repetition "ad infinitum." Getty Research Institute, David Tudor Papers, Accession # 980039, Box 14, Folder 3.

event and the line of *Composition 1960 #10 to Bob Morris*, Young created his twenty-nine *Compositions 1961* in January. They all read, "Draw a straight line and follow it." Maciunas published the book of compositions, titled *LY 1961*, in 1963, with particular dates assigned to each composition (Figure 1.18). In his process, Young first determined the concept on January 6, 1961. He next calculated an average of the number of works he had composed in a given year and then applied that number to 1961, assigning dates approximately thirteen days apart, as in January first, January fourteenth, January twenty-seventh, etc. Therefore, although he wrote out the works in one night, he projected them further into time by assigning future dates. Young claimed, "I performed all of them in March, long before many of them had ever been written according to their dates of composition."[177] The performance of all of the consecutive works lasted a few hours. During that time, Young executed all of the compositions by using a plumb bob, a weighted pointed object suspended vertically by string to establish a perpendicular line, and then drawing along the floor with chalk. For each successive work, he drew over the same line in a ritualized manner, but as he asserted, "each time it invariably came out differently."[178]

The March 31, 1961 premiere of the *Compositions 1961* took place at Harvard University, according to the event's flyer (Figure 1.19). The concert, organized by then-student Henry Flynt, also featured an exhibition of Morris's *Box with the Sound of Its Own Making*. Morris also assisted Young with the performance of the *Compositions 1961*, many of which had not yet been composed according to their dates.[179] The

[177] Kostelanetz, *Theatre of Mixed Means*, 204.
[178] *Ibid.*, 205.
[179] Flynt, "Mutations of the Vanguard: Pre-Fluxus, During Fluxus, Late Fluxus," 105.

performance of all of the consecutive works lasted a few hours. During that time, Young executed each of the compositions by using a plumb bob and then drawing along the floor with chalk. For each successive work, he drew over the same line as a chance operation, but as he asserted, "each time it invariably came out differently."[180]

Throughout 1961, Young performed this series of compositions in different combinations using a plumb bob and chalk. In 1961, Yoko Ono had invited him to organize a concert series at her Chambers Street loft. During one of his own concerts at Ono's loft, Young performed all of the *Compositions 1961* in one evening with the assistance of Bob Dunn (Figure 1.20). Describing the process of performing the works, Young wrote in a 1961 letter to David Tudor that he first established a "sight" by connecting a string perpendicularly between the floor and ceiling. He then directed Dunn to hold the plumb bob to create different points about three feet apart along a path. After Dunn had made the marks for one line, Young used a yardstick as a straight edge along which Dunn drew the lines. Young writes,

> . . . [Dunn was] careful that he stayed behind the chalk he was holding so he would be <u>following</u> the line he was drawing . . . . I always thought of the drawing and following taking place in more or less the same act . . . . I wanted this performance to be very mathematical, and workmanlike with the performers just doing what they had to do and working very hard at getting each line very straight and then bowing between each completed piece.[181]

Clearly, a great deal of concentration and precision was necessary to complete this series to Young's specifications. Describing the two collaborative performances of the *Compositions 1961* in a letter to Tudor, Cage directly addressed the problem of time

[180] Kostelanetz, *Theatre of Mixed Means*, 205.
[181] Getty Research Institute, David Tudor Papers, Box 14, Folder 2.

for the performance of these works. He writes, "By the time La Monte finished, not only had all the audience left, but Bob Dunn too had left exhausted. The next evening the project was shortened by shortening the line. Even then it took three hours."[182] This concert helps demonstrate what Young meant by "getting inside a sound." In 1962, in what would become classic Fluxus fashion, Maciunas wrote his humorous *Homage to La Monte Young*, a compositional response to the *Compositions 1961*. In this work, Maciunas dictated that any performer should "erase, scrape, and wash" any lines drawn by Young's *Compositions 1961* or any other kinds of lines, such as "street-dividing lines, ruled paper or scored lines, lines on sports fields, lines on gaming tables," or any other kind of line made by the human hand.[183]

On the heels of Young's loft concert series of 1961, Maciunas had already started organizing Fluxus concerts in which artists performed musical works composed by Fluxus members as well as those on the periphery of the movement, such as Young and Cage. Young differentiated his concert series from Maciunas's by giving each composer two nights to fully realize their performance aspirations, whereas Maciunas liked to include up to twenty different composers in a concert on any given night.[184] While Maciunas enjoyed the slapstick and shock value elements of his Fluxus concerts, Young preferred a serious approach to new music and had begun to distance himself ideologically from Maciunas by 1961. Ono had already made a name for herself in the avant-garde and could thus afford to send out small mailings advertising the concert series; as a result of her efforts and those of Cage and Cunningham, many artists, such as

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[182] *Ibid*.
[183] Nyman, *Experimental Music: Cage and Beyond*, 83.
[184] Young, interview with the author, New York City, March 15, 2004 and March 19, 2004.

Warhol, Rauschenberg, Duchamp, and Jasper Johns were able to attend various evenings of the series.[185]

Young chose the order of his artists, poets, and composers for the Chambers Street Concert Series with great deliberation, although most of the artists involved ended up performing each other's works during the concerts and had already known each other. For example, during a performance of Toshi Ichiyanagi's *Mudai Number One*, Young improvised on the score, which consisted of calligraphic brushstrokes on white paper. On the way to the concert, Young bought a large quantity of string beans and then, as his performance of Ichiyanagi's work, counted the beans out loud. He timed his counting to see how long it would take him.[186] Not only did the action repeat, but also it invoked the idea of duration. Young considered this both a theatre piece and a musical piece since he performed an action on a stage in front of an audience and because it created sound. Moreover, Young called the piece "music" mainly due to the facts that it had a score and involved a counted duration of time, two key elements of music. Therefore, due to the new definitions for music that he had set forth in the *Compositions 1960*, Young felt that he could in good faith call most of the events at Ono's loft both theatre and music.[187]

Young assigned concerts to many noteworthy members of the avant-garde, including Cage, Morris, De Maria, Brecht, Higgins, Ono, Flynt, Jennings, and the choreographer James Waring, among several others. Naturally, he also gave himself two

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[185] *Ibid*.
[186] Kostelanetz, *Theatre of Mixed Means*, 202. Ichiyanagi in turn performed Young's *X [Any Integer] for Henry Flynt* at Carnegie Recital Hall in 1961. Cage wrote of the event in a letter to Tudor, "Toshi gave a program at Carnegie Recital Hall . . . . he played a magnificent piece by La Monte: a single cluster, both arms fortissimo, utterly regular, for nine minutes or so!" Getty Research Institute, David Tudor Papers, Box 14, Folder 2.
[187] Kostelanetz, *Theatre of Mixed Means*, 203.

nights, during which he performed the *Compositions 1961* with Dunn.[188] These experiences solidified Young's reputation as a figure of the artistic vanguard, but also created a larger base for intermedia events, which would be expanded by later Fluxus events. According to Jane McFadden, this concert series also included the display of art objects created by some of the participants, including Morris's *Passageway*, a corridor that filled the entrance to the loft, as well as De Maria's *Boxes for Meaningless Work*, the instructions for which Young published in *An Anthology*.[189] As Young has declared, "I'm very interested in a combining of media into a larger whole."[190]

In the summer of 1961, Young and fellow Fluxus contributor Jackson MacLow curated a concert series at Maciunas's AG Gallery. This set of concerts, known today as "the AG Gallery concerts," featured evenings of music by Maxfield, Cage, Higgins, Morris, Flynt, Ono, and De Maria, among others, as well as a show of Ono's paintings in late July. In 1961 Chester Anderson invited Young to guest-edit an issue of *Beatitude East*, the New York City version of the magazine *Beatitude*, a San Francisco magazine that chronicled new ideas in the avant-garde. Young collected and compiled the entries in 1961; Maciunas and MacLow then published them in their most complete form as *An Anthology* in 1963 (Figure 1.21).[191] One might think of *An Anthology* as Young's major achievement in documenting early examples of concept-based art. Contributors included Young, MacLow, Maciunas, Maxfield, Flynt, Brecht, Cage, Paik, Morris, Forti Morris,

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[188] For further detail about artists involved in the Chambers Street Concert Series, see Flynt, "Mutations of the Vanguard. Pre-Fluxus, During Fluxus, Late Fluxus," 105.
[189] Jane McFadden, "Practices of Site: Walter De Maria and Robert Morris, 1960-1977" (Ph.D. diss., The University of Texas at Austin, 2003), 29-30, 35-36.
[190] Duckworth, *Talking Music*, 236.
[191] Flynt, "Mutations of the Vanguard. Pre-Fluxus, During Fluxus, Late Fluxus," 105. See also McFadden, "Practices of Site: Walter De Maria and Robert Morris, 1960-1977," 27.

De Maria, Riley, Jennings, and Dieter Rot. Other submissions were poetry by Joseph Byrd and Claus Bremer and essays by artists not normally considered part of the Fluxus circle, such as New York School composers Brown and Wolff.[192] That same year, Flynt coined the term "Concept Art" to describe the type of work published in *An Anthology*, calling it "an art of which the material [is] 'concepts,' as the material of [for example] music is sound."[193]

As noted earlier, Young submitted most of his *Compositions 1960* for the publication of *An Anthology*. However, around 1963, Young became more engrossed with his work with the Theatre of Eternal Music and effectively withdrew from Fluxus activities. As Young has said, he wanted audiences to take his work seriously and he did not enjoy the slapstick humor often engaged by Maciunas in performance.[194] This was not to say that Young did not appreciate humor or infuse it in some of his early work: as noted earlier, his *Piano Piece for David Tudor #1* had called for the performer to attempt to feed a bale of hay and a bucket of water to a piano.[195] By this moment, though, it had become clear to the avant-garde that Young was not content to dabble in the serialist idiom while acting as the straight man to Maciunas. In 1961, furthering the discussion of time in Young's work, Cage stated,

> La Monte Young is doing something quite different from what I am doing, and it strikes me as being very important. Through the few pieces of his I've heard, I've had, actually, utterly different experiences of listening than I've had with any other music. He is able either through the repetition of a single sound or through the continued performance of a single sound for a period like twenty minutes, to bring it about that after, say, five minutes I discover that what I have all along

[192] Young and MacLow, eds., *An Anthology* . . . , n.p.
[193] Thomas Crow, *The Rise of the Sixties* (London: Calmann and King, Ltd., 1996), 131.
[194] Young, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[195] Young, "Compositions," n.p.

> been thinking was the same thing is not the same thing at all, but full of variety. I find this work remarkable . . . .[196]

However, Young remained an inspiration to Fluxus artists, who continued to perform his works well into the 1960s and even created homage pieces to him, such as Emmett Williams's *Counting Song for La Monte Young*, which Williams performed at the Festum Fluxorum in Düsseldorf in 1963 (Figure 1.22).[197] In addition, Young took part in several Fluxus events at the request of Maciunas, but usually as an organizer and not as a performer. For example, in 1965, Young conducted a "Fluxorchestra" concert at Carnegie Hall, where the musicians performed a work by Ono entitled *Piece for La Monte Young 1965* (Figures 1.23 and 1.24). Because Fluxus events were performances and not always documented photographically, and also because Maciunas often printed Young's name in the list of events in his Fluxus posters and programs, historians often imagine that Young physically took part in many of these activities. In reality, after 1963, Young was a presence at Fluxus events mainly through other artists' realizations of his work. In addition, Young and Maciunas remained close friends for many years after 1963. Young has declared of his break with Fluxus and his subsequent work with the Theatre of Eternal Music:

> I never gave up conceptual art, but . . . I applied my concepts to music. And I felt that music was a more profound language in which to express my concepts and that, whereas I still love words and I always will, words are the utilitarian language of common practice, but music is the . . . cosmological language. It's the language that everyone understands. To me, it's the highest medium. I didn't abandon my works, but began to apply my conceptual imagination to sound more

[196] Kahn, *Noise Water Meat*, 229-230.
[197] Kahn, "The Latest: Fluxus and Music," 109.

> completely and to encourage Marian's work with light. I think there are a lot of parallels of sound and light—cosmologic applicability.[198]

At this point, Young was employing this ability to use time as an agent for expanded consciousness, a practice that he explored more fully in the group activities of the Theatre of Eternal Music.

The Theatre of Eternal Music

Hailing from different musical and artistic backgrounds, members of the Theatre of Eternal Music included saxophonist, singer, and composer Young, singer Zazeela, violinist Conrad, violist Cale, and drummer Angus MacLise, as well as occasional members Billy Linich (AKA Billy Name), Poons, De Maria, Morris, Johnson, Riley, and Jennings. The core group of 1964 consisted of Young, Zazeela, Cale, and Conrad (Figure 1.25). Most significantly, the Theatre of Eternal Music helped introduce the concept of the drone, or constant underlying sound, to Western music. The group sought to create what they termed "dream music" or "eternal music," based on mathematical principles and Indian Classical music, and the drone emerged as their characteristic sound. Particularly engaged with the *tamboura*, the drone instrument, the members of the ensemble worked together to incorporate the Hindustani tonal system into their own music.[199]

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[198] Young, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[199] The question of authorship has caused many disagreements among Cale, Conrad, and Young. Cale and Conrad maintain that all three of them have extensive musical backgrounds and contributed to the composition of the Theatre of Eternal Music's works. Young alleges that he was the founder and head of the group and that he never wrote his title of "composer" on any of their scores or performance flyers because he was widely understood to be the chief composer of any works that he performed at the time.

The Theatre of Eternal Music developed organically out of the avant-garde music and art scenes on the Lower East Side in New York City. Although most of the core members of the group had already joined and committed to Young's intense rehearsal schedule by the May of 1963, he coined the group's name only in February of 1965.[200] On the surface, Young seemed to have no problem recruiting musicians to collaborate with him. As Billy Name, who would later became a photography assistant to Andy Warhol, has stated about working with Young:

> La Monte, like Andy [Warhol], was the centre of his scene . . . . Everybody else was there playing with him, but he was the hierarchical chief . . . . He would talk a little lower so that you'd have to pay attention and he would take you into his confidence that way. He was a good organizer . . . . The respect was immediate. Either you knew exactly where he was or you weren't in the same room.[201]

In 1962, Young composed *The Four Dreams of China*, a series of works for tunable instruments that could sustain long tones, which the Theatre of Eternal Music began rehearsing. The series included *The First Dream of China*, *The First Blossom of Spring*, *The First Dream of the High-Tension Line Stepdown Transformer*, and *The Second Dream of the High-Tension Line Stepdown Transformer*.[202] Young has stated that *The Four Dreams of China* represent his concept of a work that could go on infinitely.[203] In addition, *The Four Dreams of China* represented a pivotal moment for Young because

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[200] Alan Licht, "The History of La Monte Young's Theatre of Eternal Music," *Forced Exposure* #16 (1995): 66.
[201] Bockris and Cale, *What's Welsh for Zen?*, 59.
[202] Cole Gagne, *Soundpieces 2: Interviews with American Composers* (Metuchen, NJ: The Scarecrow Press, 1993), 500.
[203] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 35. In 1964, Young also began composing his magnum opus, *The Well-Tuned Piano* (1964 to present), an improvised solo work that uses the tuning system of just intonation. Performances of *The Well-Tuned Piano* have lasted for over six hours.

he combined the long tones of *Trio for Strings* with the idea of group improvisation.[204] Recalling his youth in open spaces, Young enjoyed going to rural areas and listening to the constant hum made by the stepdown transformers located at the tops of telephone poles.[205] Thus, he named his compositions after the stepdown transformer and evoked his memory of the electrically produced drone by using the same pitch for the drone of the compositions.[206]

In 1964, the Theatre of Eternal Music began developing their major work, *The Tortoise: His Dreams and Journeys*, a theoretically never-ending piece that consisted of many improvised sections, including *Map of 49's Dream The Two Systems of Eleven Sets of Galactic Intervals Ornamental Lightyears Tracery*. The titles of the sections, such as *Map of 49's Dream*, often referred to musical elements such as the drone or the harmonic intervals used within the compositions; the inclusion of slightly mystical title words such as "galactic" or "dream" indicated the cosmic quality that Young envisioned for the performances. The phrase *Ornamental Lightyears Tracery*, however, was the title of Zazeela's light projections, which she viewed as an infinite work that developed from one performance to the next.

Although the group focused on lengthy rehearsals and the perfection of their musical structure, they performed often in concert and as part of avant-garde festivals. According to Young and Zazeela, performance spaces for their kind of music were hard to find in the early 1960s, and they often had to take whatever residence, arts space, or

[204] Duckworth, *Talking Music*, 253.
[205] Kostelanetz, *The Theatre of Mixed Means*, 195-196.
[206] Duckworth, *Talking Music*, 240-241.

gallery was given to them for a night.[207] Beginning in 1962, the group performed on Thursdays and Sundays at a site procured through MacLise, the 10-4 Gallery on Fourth Avenue. Soon after Conrad joined the group in May of 1963, they performed a piece with no ostensible beginning or ending, the *Second Dream of the High Tension Line Stepdown Transformer*, at the Yam Festival at George Segal's farm in New Jersey (Figure 1.26).[208] That same day, Young took part in Kaprow's happening called *The Tree*. In this piece, which Kaprow referred to as an interactive "war game," Young played a "tree man" who sat on top of a number of bales of hay under a large tree. Several bottles of beer dangled on string from the tree branches. The objective of the "forestmen," the tree man's opponents, is to knock the tree man off his bales of hay. Kaprow describes the tree man's role as follows:

> The man on the mound will start playing a saxophone (or trumpet), blowing wild jazz, the tones variously clear and garbled, almost talking, laughing or yelling to himself through the horn. Periodically, he takes a swig of beer from one of the quart bottled and squirts the stuff out on all sides with studied relish.[209]

The Yam Festival was an important moment for the underground because it signaled the widespread nature of Fluxus activity by taking place over several days and at many venues in New York and New Jersey. As part of the Yam Festival, Young and Conrad executed a five-hour long rendition of Young's *Composition 1960 #7* (B natural and F

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[207] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.

[208] Poons, a guest member of the group, designed the performance space for the Theatre of Eternal Music at the Yam Festival event at Segal's farm. I will discuss this event more fully in the chapter on Poons and music. For an overview of some of the Yam Festival events, see Kristine Stiles, "Battle of the Yams: Contentless Form and the Recovery of Meaning in Events and Happenings," in *Off Limits: Rutgers University and the Avant-Garde, 1957-1963*, ed. Joan Marter (New Brunswick, NJ: Rutgers University Press, 1999), 118-129.

[209] Getty Research Institute, Allan Kaprow Papers, Box 8, Folder 3.

sharp "to be held for a long time") at the Poet's Hardware Theatre in New York. Brecht performed Young's *Composition 1960 #2* (the fire piece) at the same event (Figure 1.15).[210] Hansen recalls of one of Young's concerts for the Yam Festival, "La Monte had a continuous piece that subsequently was performed for horns. As many as thirteen or more. It involved a group humming, vocalizing, or bowing stringed instruments on a particular note continuously. It was pre-psychedelic."[211]

Afterward the Yam Festival, Young, Zazeela, Conrad, Linich, and MacLise began performing at two more alternative arts spaces, the Third Rail Gallery and the Hardware Poets Playhouse.[212] Also in 1963, Young and Zazeela moved into a large loft on Church Street. As Alan Licht notes in his essay "The History of La Monte Young's Theatre of Eternal Music," Young's and Zazeela's move to this large loft was a boon to the group, who could rehearse there all night, any night of the week, since there were no upstairs tenants.[213]

In 1964 through connections with Cage and the Merce Cunningham Dance Company, the Theatre of Eternal Music played at the Pocket Theater in the Bowery,

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[210] Young and Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[211] Stiles, "Battle of the Yams: Contentless Form and the Recovery of Meaning in Events and Happenings,"124.
[212] Licht, "The History of La Monte Young's Theatre of Eternal Music," 62.
[213] *Ibid.*, 62. Young and Zazeela still live in this same second-floor loft, in which they have created most of their work for over forty years. Not only was it the primary practice space for the Theatre of Eternal Music, but it also contains their entire archive as well as Zazeela's paintings and drawings. In addition, their *raga* guru, Pandit Pran Nath, lived on the second floor with them during their twenty-six year apprenticeship with him. Their current Dream House space is installed on the third floor, and they perform concerts almost exclusively in that space.

which was owned by a friend of Cage.[214] The banner year of 1965 proved a busy one during which the Theatre of Eternal Music made several more forays into the art public's consciousness. They performed at well-noted events such as the Anthology Film Archives Festival of Films -- sometimes called the Anthology Festival of Expanded Cinema -- organized by Jonas Mekas.[215] That same year, the group embarked on a loft series in Poons's apartment.[216] Also in 1965 the Theatre of Eternal Music performed a rare concert uptown during Henry Geldzahler's birthday party in his 79th Street apartment. Andy Warhol attended this performance, a precursor to his own *The Exploding Plastic Inevitable*, a recurring multimedia and multisensory event from 1966 that featured the Velvet Underground, the band for which Cale left the Theatre of Eternal Music.[217] Violist Cale has described the artistic milieu that fostered performances by the group in lower Manhattan:

> All participants in this Lower East Side phenomenon enjoyed throwing their lot in with any myriad combinations of musicians, poets, dancers, who would show up playing in the most improper venues . . . . On any given night word would come of another gathering in another location just as unsuitable as the last. The idea seemed to be to redefine 'spontaneous.' Films were projected on gauze which doubled as sets for dancing with music—as likely to be interrupted by poetry reading as dancing was by film. The noise of drone was heard in the streets. 'Found art' was as likely to turn into a poem as a sculpture.[218]

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[214] Young and Zazeela, "La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri," interview, 26. The Pocket Theater was also the location of Cage's famous presentation of Erik Satie's *Vexations*, in which John Cale played piano.
[215] *Ibid*., 26.
[216] I will discuss this series, for which Poons re-named his apartment "The Four Heavens," in the next chapter.
[217] Bockris and Cale, *What's Welsh for Zen?*, 61.
[218] *Ibid*., 63.

To Zazeela, the kind of sound environment created by the Theatre of Eternal Music seemed to fill the listener's entire space, particularly because of the almost painful level of amplification. The audience not only becomes aware of the issue of sound's slow development over time, but also "maps" the experience of the sound space through time.[219] Thus, Zazeela used lights to fill visually the musical space of the group's vanguard performances, many of which fostered significant avant-garde interest in metaphysics and psychedelia. As Alan Licht writes, "The group's work with excessive amplification, light projection, and Indian music-derived drones in the early Sixties predates nearly all other examples of their use in Western music".[220]

Accounts of the audience's reactions to the Theatre of Eternal Music tend to emphasize the painfully loud atmosphere that the group created. In 1964, the group embarked on yet another concert series at the Pocket Theatre, for which they practiced their music several hours each day. Generally, the group attempted to maintain the concept that the work they were performing at the time, *The Tortoise: His Dreams and Journeys*, had an infinite duration and that, although it seemed like the same work because of the static nature of the drone, they performed different sections of it in each concert. To viewers, the concerts often seemed without beginning or end. According to Licht, "To help get across this idea at concerts, the group would play before the audience was allowed to enter, giving the impression that the piece was continuing, not starting."[221] Zazeela has stated that the group maintained a fairly narrow audience

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[219] Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 36.
[220] Clinton Heylin, *From the Velvets to the Voidoids: A Pre-punk History for a Post-punk World* (New York: Penguin Books, 1993), 6.
[221] Licht, "La Monte Young's Theatre of Eternal Music," 64.

because of the intensity, long duration, and loudness of the performances. The few people who came in as strangers usually left fairly quickly.[222]

Yet, the group's performances attracted young visual artists because of their multisensory programs. For example, Patrick Clancy, a member of the environmental sound and light collective PULSA at Yale in the late 1960s, recalls being interested in Pythagorean concepts and going to Theatre of Eternal Music performances because he felt that they embodied the idea of "dematerialized presences."[223] Other artists attended the concerts for the sheer experience of the unique phenomenon. Painter Dean Fleming regularly attended the Theatre of Eternal Music's lengthy performances. Fleming, himself a California transplant and a Park Place Gallery collaborator with Leo Valledor, discussed in the next chapter, was deeply immersed in the philosophy of Ouspensky, as well as Zen.[224] According to Fleming, young artists in downtown New York thought of Young as a visionary and, in going to the concerts, the regular audience already knew what kind of intense meditational experience they might have. In Fleming's experience, if one attended a Theatre of Eternal Music concert, one did not attempt to do anything else for the rest of the night.[225] John Perreault reviewed the Theatre of Eternal Music in *The*

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[222] Zazeela, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[223] Patrick Clancy, interview by the author, Austin, TX, November 2004.
[224] Linda Henderson, "Dean Fleming, Ed Ruda, and the Park Place Gallery: Spatial Complexity and the 'Fourth Dimension' in 1960s New York," in *Blanton Museum of Art: American Art since 1900*, ed. Kelly Baum and Annette Carlozzi (Austin / Seattle: Blanton Museum of Art / Marquand Books, 2006). For further reading on the Park Place Gallery Group, see Linda Dalrymple Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York* (Austin: Blanton Museum of Art, 2008), 1-3.
[225] Dean Fleming, conversation with the author, Austin, TX, November 2004. Fleming had also been interested in music as an art student in California's Bay Area and knew Steve Reich, another Minimalist composer, who often performed or set up music installations at the Park Place Gallery.

Village Voice in 1968, writing of the experience of their amplified drone sound, "Entering [the auditorium] was like being hit in the face with a blast of hot wind or like walking into a room full of brine, then discovering that surprisingly enough it was still possible to breathe."[226]

The group termed their sound "dream music" because it aimed to bring the audience to a highly meditational state, close to cosmic consciousness.[227] In creating a musical situation in which the listener could understand sound in a meditational manner, the band often performed using the drone frequency of the alpha rhythm, also known as the "blood-beat" of the human body.[228] By having the sound coordinate with human pulse, the listener experiences the music internally. Even Conrad, the more mathematically minded member of the group, understood the group's goal of affecting the human body with sound as a function of using numbers and frequency on a higher metaphysical level.

By combining light, abstract images, sound, and physical vibration, the Theatre of Eternal Music attempted to create synesthesia by tapping into both new technology and ancient Eastern metaphysics. When describing the group's use of just intonation,[229] a tonal theory behind Hindustani and other types of microtonal music, in 1965, Conrad

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[226] John Perreault, "La Monte Young's Tracery: The Voice of the Tortoise," *The Village Voice* (22 February 1968): 27.
[227] Tony Conrad, "Inside the Dream Syndicate," *Film Culture* 41 (Summer 1966), 7.
[228] *Ibid.*, 6.
[229] Just intonation is a tonal system distinct from twelve tone equal temperament in that it uses ratios of whole numbers rather than multiples of one interval in a harmony. Young believed that by using integers and prime numbers as the basis for his harmonic intervals, he could induce a sense of the natural order of the cosmos, since prime numbers are the basis for all harmonic vibrational relationships and "universal structure can be conceived of as vibration" (Young and Zazeela, "La Monte Young – Marian Zazeela: An Interview," interview by Nagoski, 31).

wrote in *Film Culture* magazine, "All this sounds like the mythical rigor of Eastern mysticism, perhaps, but far from this, it is the world-wide demand made upon the exacting and significant musical communicant."[230] Working as a single harmonious unit in concert, the group slowly unveiled both a scientific and a mystical preoccupation with creating meditative drones and chants. Not only did rehearsing for long hours teach the group about musical discipline, but it also emulated the meditative process. In 1965, Conrad summed up the group's guiding principle succinctly by stating, "The moment of enlightenment is a sound."[231]

[230] Conrad, "Inside the Dream Syndicate," 7.
[231] *Ibid.*, 6.

Chapter Two: Musical Matrices: Music, System, and Process in the 1960s Paintings of Larry Poons and Leo Valledor

Introduction

As evidenced by the 2004 exhibition catalog for *Visual Music: Synaesthesia in Art and Music Since 1900*, painting may be the medium with the closest ties to the concept of visual music in the twentieth century. There are very few ways in which a painting might be equated with music. One might consider the sound of a brush on canvas to be music. Or one might think of the action of creating the painting as "intermedia," Dick Higgins's term to describe artistic activity that occurred "between the media" and thus used multiple forms of media.[232] One might also think of the color embodied in some painting as synesthetic in the manner that Wassily Kandinsky described in his book *Concerning the Spiritual in Art*, in which he assigned sounds to certain colors. Not only can painting depict musical motifs—here, one need only think of Pablo Picasso's and Georges Braques' numerous Cubist images including musicians, instruments, and sheet music—but it also has the capacity to use color juxtapositions in a way that most sculpture does not.

Art historian Lynn Boland's 2014 dissertation *A Culture of Dissonance: Kandinsky, Abstraction, and Atonality, 1911-1915,* argues for a musical dissonance produced by the color correspondences in Wassily Kandinsky's paintings.[233] As Kandinsky wrote in his 1913 essay "Reminiscences," he sought a "color chorus" that

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[232] Elizabeth Armstrong, "Fluxus and the Museum," *In the Spirit of Fluxus,* ed. Elizabeth Armstrong and Joan Rothfuss (Minneapolis: Walker Art Center, 1993), 14.
[233] Lynn Boland, "A Culture of Dissonance: Kandinsky, Abstraction, and Atonality, 1911-1915" (Ph.D. diss., University of Texas at Austin, 2014).

affected his viewer's soul. Kandinsky recalls two formative experiences during his student years: seeing the Impressionist exhibition in Moscow and watching a production of Richard Wagner's *Lohengrin* in Munich. Seeing Claude Monet's *Haystacks* suggested to him the independent power of color while the experience of *Lohengrin* proved synesthetic and full of color produced by musical instruments. Summing up his philosophy, Kandinsky writes,

> Painting is a thundering collision of different worlds, intended to create a new world in, and from, the struggle with one another, a new world which is the work of art. Each work originates just as does the cosmos—through catastrophes which out of the chaotic din of instruments ultimately creates a symphony, the music of the spheres. The creation of works of art is the creation of the world.[234]

Through this "thundering collision," color juxtapositions in painting could correlate to the sensations of color produced in music, particularly for synesthetes like Kandinsky, who experienced color as sound. It stands to reason, then, that a viewer would not need representational musical motifs to intuit the sonic collision of two or more colors. But exactly *how* might a viewer interpret totally abstract painting as musical? And *how* might painters create sonic qualities in abstract painting?

This chapter considers the work and worlds of two painters working in modes of hard-edge geometric abstraction through the 1960s, Larry Poons and Leo Valledor. They came from very disparate backgrounds. Poons, the child of a businessman, was born in Tokyo and had a privileged childhood in New York. In other words, Poons had options. Valledor, an orphan, grew up in San Francisco's Mission District. Reared by his Filipino uncles in a barrio, Valledor had few options. One of them was attending the California School of Fine Arts, which allowed him to move to New York for most of the 1960s.

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[234] Wassily Kandinsky, "Reminiscences," in *Modern Artists on Art: Ten Unabridged Essays*, ed. Robert Herbert (Englewood Cliffs, NJ: Prentice Hall Press, 1964), 35.

However, not only did these two painter-musicians know one another and show together in 1964 at the Park Place Gallery in New York, an important venue for geometric abstraction, and again at the Kaymar Gallery in 1966, but Poons and Valledor both engaged with local music and poetry cultures in New York and San Francisco, respectively, that deeply informed their work (Figure 2.1). They both used evocative titles in their abstract paintings. Poons made some references to sound and music with works such as *Han-San Cadence* (1962) and *Brown Sound* (1968), which appeared on the cover of *Artforum*'s Summer 1968 issue. Throughout his career, Valledor made works in homage to the music he admired. For example, his *Whatever Stan Wants* (1980) was likely an homage to Stan Getz, while *Work of Art [to the Jazz Messenger]*, likely a reference to Art Blakey, and *The Bridge [to Sonny Rollins]*, both from 1981, reference his love for jazz directly. Further, both Poons and Valledor employed the compositional element of the painted dot.

The dot is a primal act and the simplest gesture of mark-making. It represents the instant of pigment touching a surface; in this way, it asserts the idea of potential because the painter's dot can progress into a line. The dot, like the prehistoric palm-printed red spots found in France's Chauvet cave, is the artist's first mark and, more profoundly, perhaps expresses the psychological need for some individuals to affirm their existence through the painted image. However, Poons and Valledor used dots to very different ends in terms of composition and perception in their work. The first half of this chapter aims to re-trace the cultural context for a musical interpretation of Poons's dot paintings, a series created from 1962 to about 1968; my contention is that Poons's fundamental understanding of the principles of musical composition allows for the dot paintings'

nuanced musical armature. As a counterpoint to the examination of Poons's dot paintings, the second half of the chapter explores some of Valledor's gestural, dot, and "zig-zag" works. I argue that these two artists used music and geometry to differing ends. While Poons focused on process and system in both painting and music, Valledor used geometry so that the viewer could intuit the ineffable qualities of instrumental music through the four-dimensional space of color itself, wherein he used color combinations to manipulate the tension between two and three dimensions, but the sensation of motion created in these works pulled them closer toward the theoretical spatial fourth dimension. As in the work of La Monte Young, Zen also presents itself as a factor here. For Poons, Zen was an intellectual endeavor that helped decode the world; for Valledor, it was a paradoxical mode of being itself.

Part I: Poons's Dot Paintings: The Cultural Context

In October of 2008, critic Robert Pincus-Witten paid two studio visits to the painter Larry Poons. In the catalog essay for Poons's March 2009 exhibition at the Danese Gallery, the result of these two visits, Pincus-Witten revived an early theme for criticism relating to Poons's best-known works, his dot paintings of 1962-1968. Pincus-Witten writes, "These early paintings reflect Poons's desire to have been a musician . . . . And music remains a vital concern . . . . "[235] Illustrating this seemingly finite point, Pincus-Witten describes the visual system behind these works as creating a pulsation, to

[235] Robert Pincus-Witten, "Larry Poons: Finding the Painting," in *Larry Poons: New Paintings* (New York: Danese Gallery, 2009), n.p.

which Poons replied with the tantalizing nugget, "Hell, that's Bach!"[236] And the discussion ended there.

Most scholarship categorizes Poons's dot paintings as Optical Art, yet critics and art historians cannot resist using language more closely related to sound in their descriptions of the work. Adjectives and nouns such as "vibratory," "pulsating," "rhythmic," "staccato," "lyrical," "harmonic," "notes," and "beats" crop up again and again as critics in the 1960s often commented on the rhythmic sense of motion created by Poons's color contrasts. In 1967, Lucy Lippard noted that these grid-like rhythmic paintings were like "music for color" and that the dots and ellipses seemed like musical notes.[237]

Let us consider two images of Poons taken by photographer Ugo Mulas in 1965 for the publication of his 1967 book *New York: The New Art Scene*, for which Mulas photographed "a day in the life" scenarios for many important artists (Figures 2.2 and 2.3). Featured early and prominently in the section on Poons, these two images show the artist playing his guitar in his studio. Sandwiched between images of a prefatory drawing and Poons preparing a painting's stretcher, these two portraits of Poons making music implicitly suggest the fact that music has always been a part of his creative process.[238]

Poons was born in Japan in 1937, learned guitar at a young age, and studied composition at the New England Conservatory of Music in Boston from 1955 to 1957. Toward the end of his education, he began to doubt his capabilities as a composer. As he

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[236] Pincus-Witten, "Larry Poons: Finding the Painting," n.p.
[237] Lucy Lippard, "Larry Poons: The Illusion of Disorder," *Art International* 11 (April 1967): 23.
[238] Ugo Mulas, *New York: The New Art Scene* (London: Holt, Rinehart and Winston of Canada, 1967), 212-229.

told Henry Geldzahler in a 1963 interview, "I had made up my mind to become a composer, a great musician, but I found that I didn't have the ear to hear it right away . . . . I wanted to hear it right away."[239] Poons had already started painting before he left the conservatory and enrolled at the Boston Museum School of Fine Arts in 1958. Regarding his professional shift from composer to painter—he has, however, never stopped composing music—Poons told Phyllis Tuchman in a 1970 interview, "It's like I never felt at home with really composing serious music and that always kept me nervous. When I got down to painting, I knew where I was, knew what I was doing."[240]

Poons's dot paintings consist of single fields of color punctuated with brightly colored dot and ellipse forms, such as in *Orange Crush* from 1963 (Figure 2.4). Although he originally used only dots, Poons has said that he introduced the ellipses as a way to indicate direction and motion, as seen in *East India Jack* from 1964 (Figure 2.5).[241] As part of the painting process, Poons made prefatory drawings for each painting. He regularly used graph paper and plotted grid formations using diagonals in addition to dot and ellipse forms, such as in his untitled drawing from 1962 (Figure 2.6). The drawings usually disregard color in favor of working out the given visual system, which, as will be discussed, became an indeterminate process once Poons translated the gridded drawing to colored canvases. He stated of his drawing practice, "It kept me with the music and let me start somewhere . . . . "[242]

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[239] Larry Poons, "An Interview with Larry Poons (1963)," by Henry Geldzahler, in *Making It New: Essays, Interviews, and Talks*, by Henry Geldzahler (San Diego, London, and New York: Harcourt Brace & Company / Harvest Books, 1996), 64.
[240] Phyllis Tuchman, "An Interview with Larry Poons," *Arforum* 9 (December 1970): 45.
[241] Larry Poons, interview with the author, New York City, May 5, 2009.
[242] Poons, "An Interview with Larry Poons (1963)," *Making It New,* 65.

Piet Mondrian's late "boogie-woogie" paintings and Barnett Newman's "zip" paintings (Figures 2.7 and 2.8) serve as the primary visual sources for the style of Poons's dot paintings. A friend had given Poons a book of Mondrian's mature compositions in the late 1950s.[243] Poons recalls being dazzled by the surface tension set in motion by Mondrian's grids, wherein each part vies for autonomy within the painting.[244] Of course, one cannot underestimate the importance of sound and rhythm in these paintings as Mondrian's love for cool jazz and boogie-woogie, a dance music created by giving a blues structure faster tempi and an insistent and highly rhythmic bass line, is well known. In terms of Newman, Poons was primarily interested in the large-format picture with a monochromatic color field. Poons admired works such as *Vir Heroicus Sublimis* for both the seemingly undulating color field—he talks about the inner beat of this painting in his 1965 interview for the Archives of American Art—and the visually complex relationships between lines and field.[245] Technique is an important issue to which this chapter will return; however, a discussion of Poons's engagement with the music culture of New York will help contextualize his improvisational painting technique.

Despite becoming a painter and leaving his musical composition studies, Poons maintained connections to composers and the musical avant-garde. From 1956 to 1960, composer John Cage taught experimental composition courses at the New School for

[243] Larry Poons, interview by the author, New York, NY, May 5, 2009.
[244] Larry Poons, interview by Dorothy Seckler, Archives of American Art, Smithsonian Institution, March 18, 1965.
[245] *Ibid.*

Social Research, which Poons sometimes audited.[246] Several major figures in the Happenings and Fluxus circles, including Allan Kaprow, George Brecht, Dick Higgins, Al Hansen, George Segal, and Robert Watts enrolled in the courses (Figure 2.9). Cage's courses could not have been less traditional and were based on his own music, which relied upon found and incidental sounds, aleatoric or chance processes, prepared instruments, the Zen Buddhist teachings of D.T. Suzuki, and silence. Each week, the regular students produced scores based on open-ended instructions, which might have dictated that students create a piece using only radios or base a score on a classmate's abstract paintings. Classmates often served as the musicians and regularly used physical actions to create sound.[247]

From 1959 to 1960, Poons co-owned, along with the painters Don McAree and Howard Smythe, the bohemian Bleecker Street coffee house called the Epitome Coffee Shop. The coffee house largely served as a spot for Beat poetry readings. The Epitome Coffee Shop filled a niche: poets and musicians needed inexpensive (or better yet, free) venues for performances that in turn brought in (mostly) paying customers. The presence of coffee played little to no role in Epitome's inception. Poons, McAree, and Smythe merely envisioned an inexpensive place for artists of all kinds to get together. In fact, as Yvonne Rainer has written, Mickey Ruskin consulted with Poons before opening Max's Kansas City in 1965.[248] Allen Ginsberg and Jack Kerouac were regulars at Epitome, but

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[246] Joseph Jacobs, "Crashing New York à la John Cage," in *Off Limits: Rutgers University and the Avant-Garde, 1957 – 1963*, ed. Joan Marter (Newark, NJ: The Newark Museum and New Brunswick, NJ and London: Rutgers University Press, 1999), 67.
[247] *Ibid.*, 67-69.
[248] Yvonne Rainer, "Implosions. Excerpt from 'Last Evening on Earth & Other Stories,'" *BOMB* 96 (Summer 2006): 4. Based on a 2008 interview with the artist Brigid Berlin, art historian Jason Goldman told me that Berlin remembers Poons as a regular at Max's

members of Cage's experimental classes also seized upon the opportunity to use the coffee shop as a venue for performances of their musical pieces. In a 1997 interview with Joseph Jacobs, Dick Higgins recalled that he, Al Hansen, and Poons regularly performed works at the coffee house most Friday and Saturday nights.[249] In *A Primer of Happenings*, Hansen described one of Poons's musical compositions, a performance piece titled *Tennessee* that used an electric guitar, a motorcycle, and a blue basketball as sound sources. According to Hansen,

> The idea was to have several groups of people; Group I consisted of as many people as could be gotten around an electric guitar on a stand, and (let's say there were four) one would tighten and loosen the strings, another would pluck the strings, another would work one control, another would work another control, and they would move about the guitar in some fashion. Group II was involved with the motorcycle—starting and stopping it and beeping its horn and whatnot—and . . . one person was to bounce the blue basketball and cough . . . . The piece was one minute long.[250]

Experimental musical compositions such as *Tennessee* demonstrate Poons's involvement with and dedication to the avant-garde scene. It was through the Epitome Coffee Shop that Poons became part of the New York Audio Visual Group, a music and art collective started by Higgins and Hansen. According to Higgins, the group made their concert hall debut at the Kaufman Theater on 92nd Street on April 17th, 1959, and performed what they termed "A Program of Advanced Music." Joseph Jacobs writes that this evening of experimental music gained enough notoriety that the Henry Morgan Show, an evening variety show on NBC featuring the comedian Henry Morgan, invited

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Kansas City who was known to have musical jam sessions with sculptor John Chamberlain at the venue. See Bruce Kurtz, "Last Call at Max's," *Artforum* 19 (April 1981): 26-28.

[249] Jacobs, "Crashing New York à la John Cage," 71; and Poons, interview with the author, May 5, 2009.

[250] Al Hansen, *A Primer of Happenings and Time / Space Art* (New York: Something Else Press, 1965), 105.

the group to reprise some of the performances on television. During the televised performance from Higgins's performance piece titled *Aquarian Theater*, Higgins created a painting by coating himself in green ink and rolling on a large piece of paper. Hansen ended the event by tossing a ceramic pot shard onto the painting, creating something of a percussive crashing noise. After the event, the stunned host asked Hansen if he considered it music, to which Hansen replied "It is the music of our time."[251]

In 1960 or 1961, Poons rented a loft on Church Street and befriended his neighbor, the composer La Monte Young, the subject of the prior chapter.[252] Young is best known for his use of long tones, improvisation, and the tuning system known as just intonation, which created powerful harmonic overtones that swelled to create a vibrating drone. Young, among the first composers to use the event score, became an important musical source for Poons, who felt that Young's experimentalism eclipsed that of Cage in creating music that could alter one's perception of a performance space through the swelling of harmonic overtones that undulated and flowed throughout a room.[253]

Poons began performing intermittently with Young, playing guitar and also creating sound in less conventional event pieces.[254] In April 1963, New Jersey's Douglass College, the women's college of Rutgers University, hosted a weekend called "An Experiment in the Arts" that included new music, plays, Happenings, and a roundtable. Poons, Young, Kaprow, Higgins, and Hansen, among others, performed experimental

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[251] Jacobs, "Crashing New York à la John Cage," 73.
[252] Poons, interview with the author, May 5, 2009.
[253] *Ibid*. For a fuller discussion of event scores, see Simon Shaw-Miller, "'Concerts of Everyday Living': Cage, Fluxus and Barthes, Interdisciplinarity and Inter-media Events," *Art History* 19 (March 1996): 1-25; and Liz Kotz, "Post-Cagean Aesthetics and the 'Event Score'," *October* 95 (Winter 2001): 55-89.
[254] La Monte Young, interview with the author, New York City, March 15 and 19, 2004.

live music, as evidenced by Peter Moore's photograph of Poons creating sound by pushing an upturned shopping cart over a hardwood floor (Figure 2.10).[255] In May of 1963, Poons performed guitar with Young's octet during the Fluxus Yam Festival events at George Segal's farm in East Brunswick, New Jersey. Young credits Poons for creating the seating arrangement of the musicians in which each musician sat at a point of two intersecting diamonds. In a letter to Kristine Stiles, Al Hansen recalled of the day, "La Monte Young and Larry Poons did something way off in the fields."[256] Mark Perlgut, a Rutgers student, reviewed the concert more fully for the *Rutgers Daily Targum*, writing,

> [The audience] moved around the chicken coop onto another field on the South Brunswick farm for a 'concert' by Young and several others, all playing violins and other string instruments with bows. The concert last for an hour and consisted on one soft note played continuously . . . . The day was a success.[257]

Young felt that this orchestra configuration was an excellent vehicle for allowing the harmonic overtones created by his drone works to be heard and continued to use the double diamond construction in subsequent events, both for the musicians' seating and as a visual backdrop (Figure 2.11).[258] Visually, this double diamond configuration is very similar to the geometric patterns used in Poons's prefatory drawings; in fact, Poons based this formation on his use of grids in the dot paintings (Figure 2.12).[259]

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[255] Joan Marter, "Chronology," in *Off Limits: Rutgers University and the Avant-Garde, 1957-1963*, ed. Joan Marter (Newark, NJ: The Newark Museum and New Brunswick, NJ and London: Rutgers University Press, 1999), 171.
[256] Kristine Stiles, "Battle of the Yams: Contentless Form and the Recovery of Meaning in Events and Happenings," in *Off Limits: Rutgers University and the Avant-Garde, 1957-1963*, ed. Joan Marter (New Brunswick, NJ: Rutgers University Press, 1999), 124.
[257] Mark Perlgut, "La Monte Young: An Offbeat Introduction," *Rutgers Daily Targum* (New Brunswick, NJ), November 19, 1963, page unlisted. Article found in Getty Research Institute, Allan Kaprow Papers, Box 38, Folder 11.
[258] Young, interview with the author, March 15 and 19, 2004.
[259] Poons, interview with the author, May 5, 2009.

In 1965 and into 1966, as a sometime guitarist with the Theatre of Eternal Music, Poons inaugurated a concert series for the ensemble in his loft. Poons temporarily named his loft "The Four Heavens" specifically for the shows and titled the series "The Concerts of the Four Heavens" (Figure 2.13).[260] Henry Geldzahler, then curator of twentieth century art at the Metropolitan Museum of Art, helped Poons attain funding for the loft concert series, which introduced the Theatre of Eternal Music and drone to a more mainstream group of artists. Argentine artist Oscar Masotta recalled attending one of the concerts at the Four Heavens, writing in 1967 that he learned of Poons through Young, who was "close to the 'cool' painters."[261] Masotta further elaborates,

> . . . set discreetly on certain walls, once could distinguish canvases: these must have been pictures by Larry Poons. After climbing the last staircase, one was assaulted by and enveloped in a continuous, deafening noise, composed of a colorful mix of electronic sounds, to which were added indecipherable but equally constant noises. . . . One [of the five musicians] played violin, while . . . the other four remained as though paralyzed, with the microphones almost glued to their open mouths . . . . adding a continuous guttural sound to the sum of electronic sounds. . . . Before them, between these five and the public, could be seen the naked spectacle of a tape recorder playing a tape loop and cables of an amplifier device.[262]

Also in 1965 the Theatre of Eternal Music, including Poons, performed a rare concert uptown during Geldzahler's birthday party in his 79th Street apartment, where the group set up on top of Geldzahler's overturned mattress on the floor and played for several hours (though, notably, not as many hours as Young thought that the concert deserved). Andy Warhol attended this performance, which is believed by many to be a precursor to

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[260] Young, interview with the author, New York City, March 15, 2004 and March 19, 2004.
[261] Oscar Masotta, "I Committed a Happening," in *Listen, Here, Now! Argentine Art in the 1960s: Writings of the Avant-Garde*, ed. Inés Katzenstein (New York: Museum of Modern Art, 2004), 194.
[262] *Ibid.*, 194-195.

his recurring event *The Exploding Plastic Inevitable*.[263] In terms of musical culture, this was a significant moment in New York, not only for avant-garde music, but also for rock and roll. 1964 had witnessed the beginning of the "British Invasion" with the Beatles' much-documented first visit to the United States, followed by a hugely successful Rolling Stones concert at Shea Stadium in 1965. For Young and others, this influx of British rock and roll signaled a sea change for the avant-garde because rock became a more dominant musical force in the underground circles, for whom the British rock sounded more edgy (and therefore, acceptable) than American pop music geared towards teenagers.[264] Even John Cale, a musical figure fully formed out of European avant-garde music cultures, left experimental classical music to play rock-and-roll with the Velvet Underground. Poons himself embraced many genres of music, from classical to rock to Hank Williams's country music.[265]

Zen and the Dot Paintings

During a 2009 interview with Poons, I asked him how he came up with titles for the dot paintings. He responded, "All of them came from the Han-Shan 'Cold Mountain' poems."[266] Although this is not entirely true, as he described the ways that the poems functioned for him, it became clear that his interest in these medieval Chinese poems was part of a broader cultural matrix. As he says, Zen itself was part of the fabric of the avant-garde art scene in New York in the late 1950s and early 1960s. Very little is known about

[263] John Cale and Victor Bockris, *What's Welsh for Zen: The Autobiography of John Cale* (London: Bloomsbury, 1999), 61.
[264] Young, interview with the author, March 15 and 19, 2004.
[265] Poons, interview with the author, May 5, 2009.
[266] *Ibid.*

the genesis of the Cold Mountain poems or their author. Han-Shan was a T'ang Dynasty recluse who probably lived during the late eighth and early ninth centuries. He mostly lived in solitude in the T'ien-t'ai mountains in southeast China, and it is believed that he took his name, Han-Shan, meaning "Cold Mountain," from the place where he lived. He was a Buddhist, but it is unclear whether or not he had ever taken monastic orders. His three hundred and eleven extant poems, many of which consisted of only five to seven Chinese characters, were found inscribed onto rocks, trees, and walls on Cold Mountain and the surrounding countryside. They were first recorded in the tenth century, when the prefect of the area sent the monk Tao-ch'iao to copy them down.[267]

Literary historians now consider the Cold Mountain poems "eco-poetry" because of the abundance of natural themes and praise of nature. In fact, the poems are full of polar themes in general: rural solitude versus crowded urban life; the materialist mind versus the Buddha mind; winter versus springtime; youth versus age; elation versus pain; and most significantly for Poons's purposes, sound versus silence. They are short—most of them around seven lines—and they are believed to be some of the earliest Zen poetry. However, these were not widely known to English readers until 1954, when Arthur Waley translated twenty-seven of the poems in English.[268] All 311 poems were not published in English until Robert Hendricks' 1990 translation. However, the most significant translation for the American avant-garde was the set of twenty-four poems published in the *Evergreen Review* by poet and Zen practitioner Gary Snyder, then a

[267] Robert G. Henricks, *The Poetry of Han-Shan: A Complete, Annotated Translation of Cold Mountain* (Albany: State University of New York Press, 1990), 3-4, 11.
[268] Arthur Waley, "27 Poems by Han-Shan," *Encounter* 3 (September 1954): 3-8.

graduate student of Asian languages at Berkeley, in 1958; he published a longer set of translations in 1965.[269]

Snyder was a Bay Area Beat poet, friend of Allen Ginsberg, Philip Whalen, Kenneth Rexroth, and Jack Kerouac, and the subject of Kerouac's 1958 novel *Dharma Bums*. "A peacefuller scene I never saw," Kerouac wrote in observing Japhy Ryder, the name of Snyder's character in *Dharma Bums*, in the midst of studying Han-Shan's Cold Mountain poems in the Mill Valley cabin that they shared in the mid-1950s. In 1959, Alan Watts, a philosopher on Asian metaphysical philosophy and its uses in popular culture, wrote an influential essay called *Beat Zen, Square Zen, and Zen,* published as a pocket-sized book by City Lights Bookstore in San Francisco in 1959.[270] In it, he contrasted popular Americanized forms of Zen with serious Zen practice. Notably, Watts held up Snyder, then stationed at monastic centers in Japan, as representative of true Zen.[271] Snyder's heightened popularity as a Zen Dharma Bum at just this moment ensured that Han-Shan's poems were read by students of Zen across America, which brings us back to the subject of Poons and the dot paintings.

It was through Cage's Happenings circle that Poons first engaged with Zen writings by D.T. Suzuki, and with both the *Tao Te Ching* and Han-Shan's Cold Mountain poems.[272] It is not surprising that the Cold Mountain poems were passed around in Cage's circle, since forty-seven of them directly refer to the experience of music or

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[269] Gary Snyder, "Cold Mountain Poems," *Evergreen Review* 2 (Fall 1958): 68-80.
[270] Alan Watts, *Beat Zen, Square Zen, and Zen* (San Francisco: City Lights Books, 1959).
[271] Bob Steuding, *Gary Snyder* (Boston: Twayne Publishers / G.K. Hall and Co., 1976), 50.
[272] For more on Zen in Cage's circle, see Alexandra Munroe, "Buddhism and the Neo-Avant-Garde: Cage Zen, Beat Zen, and Zen," in *The Third Mind: American Artists Contemplate Asia, 1860-1969* (New York: Guggenheim Museum, 2009), 199-215.

silence and this does not count the dozens of poems that invoke noise or silence through natural imagery. Birds and insects produce the widest range of sound, along with water and trees. Music, and specifically the sounds of nature, offers fleeting pleasure. For example, poem 146 states, "If you have music, then you must enjoy . . . / Our stay in the world—but a brief moment."[273] Notably here, the calligraphic character Han-Shan used for "music" is cleverly synonymous with the word "happiness," *lo* or *yüeh*.[274] Similarly, a line from poem twenty-six declares, "Harmoniously, she [a bird] sings, with exact pitch and tone . . . . / If you hear the sound of string and voice, / you should dance and delight in today."[275] By contrast, though, most of the references to silence infer a more subdued introspective outlook. For example, poem four states, "In helping me sing—for music, there are the birds; / I'd ask about the Dharma, but to talk with there's no one at all."[276] And Han-Shan writes in poem 277, "In front of a cliff, all alone I silently sit; / The round moon brightly beams in the sky. / Free, empty, unbounded—my soul in itself it is pure. / Embracing the Void, I penetrate the mysterious and profound. / The moon is the hinge of the mind."[277]

How might a viewer read Poons's dot paintings against a background of these Zen sources? First, I would argue that the experience of looking carefully at these works is a highly meditative act that best occurs over a longer stretch of time in order to experience the after-images. This experience can thus serve as a path to expanded consciousness, the pinnacle of which in Zen is enlightenment. In *Night on Cold Mountain* and *Day on Cold*

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[273] Henricks, *The Poetry of Han-Shan: A Complete, Annotated Translation of Cold Mountain*, 212.
[274] *Ibid.*, 212.
[275] *Ibid.*, 62.
[276] *Ibid.*, 35. The Dharma (*fa*) is the teaching of Buddha.
[277] *Ibid.*, 376.

Mountain, the shockingly bright turquoise dots register as having undulating halos of color (Figures 2.14 and 2.15). Furthermore, the sparse population of dots presents something of a Zen puzzle, or *koan*, to the viewer. One immediately senses that there is a visual order of some kind; the asymmetry leads one to try to read the painting in a linear fashion, but there is not necessarily a clear point of entry or departure. Only after careful study does one discover the visual system at play. Echoing a core teaching of Zen, the potential rests within and it is up to the mind to unlock it. In this sense, the act of looking is an improvisation: as the eyes travel over each dot, they check and re-check the logic of the system.

Han-San Cadence might be read in terms of visual rhythm and visual-acoustic harmony (Figure 2.16). Although the word "cadence" is usually thought of as indicating rhythm, it is a pivotal musical device as well. In traditional music, composers create phrases based on a question-and-answer (or call-and-response) system of antecedents and consequents. The antecedent opens the musical phrase with a question, and the consequent logically closes the phrase with resolution. Between each antecedent and consequent and then again at the other end of the consequent are pitches or chords; these are the cadence. They set the tone for the following notes. Much Western poetry operates in a similar manner metrically. But in *Han-San Cadence*, as in the flow of the Cold Mountain poems, the cadence and meter are not logical. There appears to be a loose bilateral symmetry to the painting, but it does not hold. One might internalize this as a visual paradox analogous to the juxtaposition of duality in the poems, such as the collage of sound and silence, joy and despair, etc. There is a meter to the paintings and the poems, but it is seemingly self-contradictory.

Poons did not aim for his paintings to be used as Zen musical and meditational devices. However, there is no doubt that he intended to create a heightened sensorial experience for the viewer of his paintings. The retinal fatigue that occurs from a long viewing of a dot painting allows for a renewal or cleansing of the visual field. The retinal motion caused by the juxtaposed colors creates this fatigue. There is a quasi-synesthetic quality to the dot paintings that can be both elevating and numbing. Therefore, I submit that the use of Zen in the dot paintings has a conceptual parity to Poons's use of musical models of scoring, which I will discuss in the next section. They are not paintings masquerading as Zen motifs or musical scores, but very subtly, they are paintings *like* these things. This creates an indexical relationship that allows for the reading of the works beyond their formal qualities, but without simplifying the works as painted imitations or facsimiles of Zen votive objects or musical scores.[278] Ultimately, time may

[278] During my interview with Poons, we disagreed on the terms by which a viewer might read his dot paintings. Poons had received positive criticism from Clement Greenberg in the 1960s, a moment of affirmation, and sees himself as a formalist painter attempting to put paint to canvas in the grand traditions of other painters he admires, such as Velazquez, Picasso, and Pollock. In this way, he sees his painting practice as separate from his musical practice, even though the two are completely intertwined as an everyday occurrence. He told me that he does not believe that an artist is a product of his or her time, a premise upon which we fundamentally disagree. I feel that approaching the dot paintings as if Poons made them in a cultural vacuum both mythologizes them and limits their interpretive possibilities. As a cultural historian approaching objects, I look first and historicize second. Poons abandoned his hard-edge style in 1969 and began painting in style new to his oeuvre: colorful expressionism. When I asked why, he responded that his then-dealer, Leo Castelli, had begun to pre-order dot paintings for clients. In an act of rebellion against being pigeon-holed as "the dot painter," Poons left Castelli for Larry Rubin's gallery and embraced his expressionist style, a sequence of events that he recalls with some regret because his career, though steady, never quite recovered to the level at which he operated in the art world in the 1960s. I believe, with the utmost respect, that Poons embraces Greenbergian formalism, because it harkens back to a wonderful decade for his career, the 1960s, but part of what made that moment so special and fruitful was his cultural milieu and the ideas circulating through his social network. Ultimately, Poons understood what I wanted to do with cultural context in my project, but he didn't want to

be the mitigating factor in the experience of these works as sensorial. Or, to echo Han-Shan, "In my first thirty years of life / I roamed hundreds and thousands of miles. / Today I'm back at Cold Mountain: / I'll sleep by the creek and purify my ears.[279]

Poons's Process and Graphic Music

Investigating the relationship between the dot paintings and musical scores necessitates returning to the matter of Poons's process. For each painting, Poons first made the preparatory drawing, next laid out the backing field of color on canvas, and then transposed the grids and, finally, the dot formations to canvas.[280] He first used pencil on the canvas and then filled in the dots with paint. *Day on Cold Mountain* has visible grid lines, which help illustrate the visual system employed on a gridded square (Figure 2.14). This work has a companion painting called *Night on Cold Mountain* (Figure 2.15), and the titles of these works, along with referencing the Cold Mountain poems, make a nod to composer Modest Mussorgsky's 1867 opus *Night on Bald Mountain*. In this grid system, a dot or ellipse may occupy one of eight locations within the four sides of each square, either in the corners or at halfway points between the corners. The dots never cross the lines or axes of the grid and a dot always goes within a square. If Poons has introduced a diagonal to the grid, creating a parallelogram, then an ellipse (rather than a dot) occupies its interior, as in the drawing in Figure 2.12. By removing most traces of

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concede easily after decades of dictating that criticism of his work center around purely formal concerns. As I left his studio, he paid me one of the nicest compliments I have ever received, saying, "You know, today is one of those days that makes me glad I didn't die yesterday."

[279] Gary Snyder, *The Gary Snyder Reader: Prose, Poetry, and Translations, 1952-1998* (Washington, DC: Counterpoint, 1999), 525.

[280] Bockris and Cale, *What's Welsh for Zen?*, 61.

the connecting grid lines, as in *Han-San Cadence* of 1963, the connecting dots and ellipses appear to float along the background color (Figure 2.16). Sometimes Poons put two dots within the squares or parallelograms, in which case he would double the number of potential locations to sixteen. For example, in *Enforcer*, Poons used a combination of single and double dots (Figure 2.17). In addition, he would sometimes further multiply the numbers of dots within each part of the grid, in which case he would correspondingly multiply the numbers of possible locations for the dots.

One way to interpret this visual matrix as a musical system is to think of it in terms of the major and minor scales, which have dominated Western music since the sixteenth century. The twenty-four major and minor scales consist of eight notes, the last of which repeats the first as the octave. Because the dot or ellipse has a possibility of occupying one of eight spots, I argue that Poons has created a visual system that *mimics* the complexity of scales to create intervals between pitches. Barbara Rose alluded to this possibility in 1964: "The placement [of the dots] is mathematically worked out in terms of intervals, series, or frequencies, in a manner related to advanced musical composition."[281] Lucy Lippard also noted Poons's (and Op Art's) proximity to new music techniques, stating in a 1965 essay, "The more imaginative color art has parallels in serial and electronically programmed music. Its structures are similarly based on repetition, chromatic dissonance, scientific and mechanical sources, rather than on traditional harmonics."[282] What is more, in the works more densely populated with dots and ellipses, the proximity of the two or more dots within each grid area creates the

[281] Barbara Rose, "The Primacy of Color," *Art International* 8 (May 1964): 22. Rose also refers to Poons's interest in the rhythmic qualities of Newman's zip paintings and Mondrian's boogie-woogie series as quasi-musical sources.
[282] Lucy Lippard, "New York Letter," *Art International* 9 (March 1965): 50.

visual rhythm or beat so present in scholarship in these works. A musical analog also exists for this. When two notes of nearly the same fundamental frequency or pitch are sounded together, the resulting harmonic overtone creates what is called an acoustic beat, which the human ear and brain process even if it does not register.[283]

Perhaps reacting to the wave of literature on Op Art resulting from William Seitz's exhibition *The Responsive Eye* at the Museum of Modern Art in 1965, which exhibited a brightly colored Poons painting, much has been written about the after-images created by the vibratory color combinations in the dot paintings. With these works, after a long period of looking, the eye registers the color of the dots as a complementary color, which was often the background color. When the eyes closed, the image of the dots as this other color remained in the mind's eye.[284] In essence, after looking at a dot painting for a while, the eye might register the amount of light hitting the retina as a perceptual impression of other colors, or an after-image. Donald Judd likened the after-images in Poons's work to Werner Heisenberg's uncertainty principle in quantum physics.[285] Heisenberg's 1930 book *The Physical Principles of Quantum Theory* posited that it is impossible to precisely pinpoint certain pairs of physical properties of a particle in relation to one another.[286] Heisenberg's uncertainty principle, though dealing

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[283] Cornelius Cardew, "Wiggly Lines and Wobbly Music," *Studio International* 192 (November – December 1976): 249.

[284] For discussion of the perceptual motion of Op Art, including after-images, see Guy Brett, *Kinetic Art* (London: Studio-Vista, 1968) and Frank Popper, *Origins and Development of Kinetic Art* (London: Studio Vista, 1968). Poons was also part of the Op Art exhibition "The Responsive Eye" in 1965, the catalog of which explores the kineticism of Op Art. See William Seitz, ed., *The Responsive Eye* (New York: Museum of Modern Art, 1965).

[285] Donald Judd, "New York Letter," *Art International* 9 (April 1965): 74-75.

[286] See Werner Heisenberg, *The Physical Principles of Quantum Theory* (Chicago: University of Chicago Press, 1930).

with measurement, had become popularized as an observer effect, which refers to the changes made on an object or phenomenon via the act of observation. Judd associated the after-images he saw in Poons's recent paintings exhibited at the Green Gallery to the observer effect in Heisenberg's quantum theory. As Judd writes,

> The laws of nature formulated in mathematical terms no longer determine the phenomena themselves, but the possibility of happening, the probability that something will happen . . . . The various groups and spaces [in Poons's dot paintings] are the results, not of point by point composition, but of the correspondences or lack of them of the various schemes.[287]

Lucy Lippard, reviewing Poons's painting in the 1965 exhibition "The Responsive Eye" at the Museum of Modern Art, wrote that Poons " . . . has developed a valid art from the strategic placement of dots on a solid complementary ground and setting up an invisible form, or 'echo,' by means of the after-images. . . . his tantalizingly elusive compositions do not exist without the 'responsive eye' of the spectator."[288] A viewer might read the after-images seen in Poons's dot paintings as the sensory equivalent to the acoustic beat, particularly if the viewer is prone to synesthesia, the phenomenon of experiencing two of the same senses at once. Relating to an observer effect, one might intuit the visual beats created by the dot-field combinations as aural beats, read over time rhythmically. One might also relate these to the Zen tenet of *nen*, or impulse sensations. These are pre-conscious sensations, or the feeling of a sense before cognition of what it is. In Zen, grasping sound is a form of *nen*: when one first perceives a sound, before knowing what made the sound, the sonic stimulus appears as a pure sensation.[289] This also relates to the practice of improvisation, a topic to which this chapter will return.

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[287] Judd, "New York Letter," 75.
[288] Lippard, "New York Letter," 50.
[289] Katsuki Sekida, *Zen Training: Methods and Philosophy* (New York / Tokyo:

A second line of inquiry concerns avant-garde composition itself and the rise of the graphic score. A score in traditional notation by J.S. Bach and a work with graphic notation by György Ligeti help illustrate a change in notational scoring (Figures 2.18 and 2.19). What we think of as traditional music scoring and notation dates to the sixteenth century. In the Western notion of traditional scoring and notation, one finds staves of five lines along which the placed notes indicate pitch. Notational progression from left to right refers to time in measures.[290] In the 1950s, this evolved as composers began to imagine how to score sounds created outside the realm of what musicians ordinarily did with musical instruments. The advent of electronic music composed with magnetic tape splices negated the need for a score, but many composers created them regardless, and often as accompanying visual pieces.[291]

Composer Cornelius Cardew gives a good example of graphic notation: " . . . if a composer wants a string orchestra to sounds like a shower of sparks, he can interrupt his five-line staves and scatter a host of dots in the relevant space, give a rough estimate of the proportion of plucked notes to harmonics, and let the players get on with it."[292] In this case, using graphic notation has a wholly pragmatic function in telling the performer what to do, as in the Ligeti piece. Graphic notation stands in contradistinction to graphic music, which is far more conceptual and allows a performer to improvise almost fully, as in Earle Brown's *December 1952*, a work discussed more fully in the final chapter of this dissertation (Figure 2.20). This score eschews traditional musical notation in favor of

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Weatherhill, 1975), 113.
[290] James D. McCawley, "Music Notation," in *The World's Writing Systems*, eds. Peter T. Daniels and William Bright (Oxford: Oxford University Press, 1996), 847-849.
[291] Cardew, "Wiggly Lines and Wobbly Music," 250.
[292] *Ibid.*, 252.

horizontal and vertical rectangles that may be improvised upon by the conductor or performer. Cardew interpreted *December 1952* as a directive for the performer to play whatever they would like in an orderly and geometric fashion.[293] Cardew's mammoth 193-page graphic score called *Treatise* (1963-1967) works in a similar manner (Figure 2.21). Musicologist Paul Griffiths once called this work the Ring cycle of graphic music, and Cardew himself has referred to *Treatise* as his contribution to intermedia: part novel, part score, and part drawing.[294]

An event score by La Monte Young represents another form of graphic notation and graphic music, wherein the composer scores the music through text, as discussed in chapter one. In *Composition 1960 #10 to Bob Morris*, Young directs the musician to "draw a straight line and follow it," providing a sort of graphic notation (Figure 1.1). The outcome of this chance operation depends entirely on the realization chosen by the conductor or performer. As a last example, John Cage's score for *Variations II* represents graphic music in the manner that *December 1952* does (Figure 2.22). In creating the score for *Variations II*, Cage used drawings made by musicians as the improvised score. Salomé Voegelin writes of one of the pitfalls of graphic scores, however, in stating that the object itself can quickly come to assume greater importance than the performance of the work. In this way, the dual nature of the graphic score (and the event score by extension) as object and directive becomes more problematic. Voegelin asserts,

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[293] *Ibid.*, 251.

[294] Timothy Taylor, "Moving in Decency: The Music and Radical Politics of Cornelius Cardew," *Music & Letters* 79 (November 1998): 564 – 65. See also Cardew, "Wiggly Lines and Wobbly Music," 252. For more on *Treatise*, see Brian Dennis, "Cardew's 'Treatise' (Mainly the Visual Aspects)," *Tempo* 177 (June 1991): 10, 15. See the Block Museum at Northwestern University's animation of *Treatise* at http://www.blockmuseum.northwestern.edu/picturesofmusic/pages/anim.html.

> I understand graphic scores as an effort of democratization, empowering the performer out of his role as the interpreter into that of a producer. On the other hand, however, and almost paradoxically, due to the variability of the actual sounds produced the graphic score might attain even more status vis-à-vis its fleeting performance, and a critic might feel legitimated in ignoring the performance altogether and instead focus exclusively on the score.[295]

Strong affinities exist between Poons's use of improvisation within his visual system and the methods of improvisation used to both create and perform graphic music. Although he made prefatory drawings for each painting, Poons asserts that the painting process was a much more intuitive rather than a fixed exercise, and he allowed himself to improvise on the placement of the dots and ellipses while painting.[296] In the series of photographs by Mulas, the photographer captures Poons's process of walking away from the paintings, examining them, walking back toward the canvas, making changes, and repeating these physical actions of his improvisation (Figures 2.23 and 2.24).[297] A viewer might liken Poons's physical process of putting dot to canvas to a mid-century composer writing a score by intermittently stopping and examining how the sounds already written play out against each other. This is contrary to the earlier virtuoso method of scoring a vast opus in one long sitting.[298] As a result, the tension between the fixed system so carefully laid out on paper and the intuitive painting of the dots creates a paradox or illogicality that makes the work dynamic. One might then relate this paradox metaphorically to the shift that occurs when a musician improvises upon a graphic score. Returning to the idea of the after-images or halo effect produced by eye after looking at the paintings, another aspect of Poons's improvisational process becomes clearer in that

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[295] Salomé Voegelin, *Listening to Noise and Silence: Towards a Philosophy of Sound Art* (New York: Continuum Books, 2010), 201.
[296] Poons, interview with the author, May 5, 2009.
[297] Mulas, "Poons," 224-227.
[298] Young, interview with the author, March 15 and 19, 2004.

he experiments not only with the placement of the dots, but with color as well. As a detail from his *Via Regia* (an example of a non-Han-Shan title) shows, Poons often repainted the dots with different colors, leaving a halo of the original dot visible (Figure 2. 26). This creates a visual harmony that, depending on every viewer's vision, could resonate as either a dissonance or a consonance.

Much writing on the dot paintings emphasizes that time plays a critical role in the viewer's experience of the dot paintings. In the words of Judd from an *Art International* review of 1965, "It takes quite a while to look at Poons's paintings."[299] However, a viewer does not just *look* at the asymmetrical dot paintings; one *reads* them. In doing so, the eyes bump along every dot, attempting to figure out the underlying system. In a way, then, each viewer performs a kind of improvisation in the act of reading and interpreting these paintings, much as a musician does with a score. Just as the act of reading a musical score tires the eyes over time, so does the act of reading a Poons canvas, creating a retinal fatigue.[300] What is more, a viewer with some understanding of mid-century experimental music might begin to make connections between the visual resonances of the paintings and new techniques in music composition.[301] If thinking of the paintings in musical terms, one might, for example, equate Poons's ellipse as a whole or half note or a marker of a long tone found in a drone piece by Young, such as *For Brass* (1957) (Figure 1.6).

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[299] Judd, "New York Letter," 75.

[300] I thank my Smithsonian Institution colleague Mary Beth Peterson Zundo, a 2008 Smithsonian American Art Museum Predoctoral Fellow and an active musician, for our discussions on this subject.

[301] There may appear to be a contradiction in contextualizing the dot paintings in terms of both the diatonic scales and graphic music. I do not believe that there is, however, because Poons does not take an either / or approach to his taste in music. He has stated that he appreciates the innovation of mid-century composition while still loving the music of Bach and Beethoven.

The 1963 dot painting *Euthalia* is an anomaly among the dot paintings because of its solitary and off-center lavender dot against a bright orange background (Figure 2.26). When compared to other paintings whose choirs of dots seem to vibrate like atoms viewed with an electron microscope, *Euthalia* just appears *silent*, or nearly silent. Given a painting such as *Euthalia*, a viewer might think of the silences embodied in many musical pieces composed after John Cage's *4'33,"* a work famously inspired by the white paintings of Robert Rauschenberg (Figure 2.27). A parallel exists in *Euthalia*, whose single dot seems to be the visual counterpart to minute incidental noise. This fits seamlessly with Zen paradox in that it is silence that is not silence, just as a white painting will never be pure white, since it immediately attracts invisible dust particles. The title *Euthalia* refers to the genus name of several species of the most spectacularly colored, and often spotted, brush-footed baron butterflies. The butterfly, of course, is a symbol of renewal or rebirth from a chrysalis state and a recurrent theme in Zen writing and a figure in the Mahayana Buddhist "heart sutra."[302] In fact, butterflies make several appearances in the Cold Mountain poems, most notably in the haunting poem eighteen, a story of spring.[303] Thus, with this title and peculiar single dot, Poons could be making a

[302] One common Zen fable tells of a person watching a butterfly struggle to emerge from its cocoon. The onlooker feels empathy for the butterfly's struggle and tears part of the cocoon, helping the free the butterfly. The butterfly is injured in the process and cannot fly straight. The Zen lesson is that, like the butterfly, the Zen devotee in *zazen* must face the challenge of renewal alone.

[303] Henricks, *The Poetry of Han-Shan: A Complete, Annotated Translation of Cold Mountain*, 54. The translation of Poem 18 reads as follows:
"Last year is gone, and I trade in a year full of sorrow;
But spring has come, and the colors of things are all fresh and new.
Mountain blossoms giggle at sparkling streams.
While trees on the cliff sway in mists of green.
Butterflies and bees with their fluttering and buzzing
In their own way speak of their joy;

sly reference to one of the most infamous event scores, Young's *Composition 1960 #5*, the so-called "butterfly piece." Poons, as Young's collaborator and neighbor, knew this series of compositions well. In *Composition 1960 #5*, Young directed the performer to let loose a single butterfly in the auditorium. As Young asserted in *Lecture 1960*, "the butterfly piece was music . . . . "[304]

Similarly, if reading *Euthalia* as an interpretation of this score, or as a performance itself, it is not a stretch to extrapolate that single dot as a faint pitch against silence, or a near silence upon silence. The cool lavender of the dot has just enough white mixed in that the value does not register as a stark contrast against the bright orange background. Because it is in the upper left quadrant of the painting, the dot reads more as a peripheral aberration in the visual field. It is the visual equivalent of a single butterfly, gliding through an auditorium, making imperceptible music with its wings. However, the bright orange background may initially seem like an unusual analog to a field of silence. Discussing the possibilities of a charged silence, a concept applicable to Young's work after 1963, Voegelin asserts, "When there is nothing to hear, so much starts to sound. Silence is not the absence of sound but the beginning of listening . . . . In silence the visual perspective vanishes into sensorial simultaneity. The sound field is compact but potentially infinite."[305] While there is not necessarily a one-to-one correlation between the visual and sonic (or silent) in Poons's dot paintings, the perhaps paradoxical vagueness in the face of these hard-edged paintings helps allow for this musical reading.

Even more delightful the fish and the birds.
Rambling with friends, my emotion's not yet spent,
And 'til dawn I cannot get to sleep."
[304] Young, "Lecture 1960," 74.
[305] Voegelin, *Listening to Noise and Silence: Towards a Philosophy of Sound Art*, 83-84.

These paintings do not tell the viewer everything and therefore avoid a singular reading as musical compositions.

Poons did not intend for his works to be understood as graphic music; yet the persistent critical dialectic of music in these paintings speaks to issues of reception. Can the mind hear what it sees? The achievement of these paintings is that their visual complexity allows them to be read in terms of another discipline. Therefore, I do not wish to state that these paintings are graphic scores that musicians can play on instruments; however, in the spirit of avant-garde music, I would not deny that they lend themselves in a meaningful way to such a reading and that looking at Poons's painting practice in the context of his abiding concern with music is one valid way to approach them. Perhaps, to latch onto Hansen's phrase, they represent another way to express "the music of our time."

Part II: Leo Valledor: Jazz Messenger

"I saw the best minds of my generation destroyed by madness, / starving hysterical naked . . . / angelheaded hipsters burning for the ancient heavenly connection to the starry dynamo in the machinery of night / . . . contemplating jazz."[306] Allen Ginsberg, in his incendiary poem *Howl* from late 1955, proclaimed these words as a siren call for outcasts of the Beat Generation for the first time at a reading at the Six Gallery in San Francisco. Poet John Clellon Holmes remembers of the event that Ginsberg " . . . [raised] his *Howl* against the cautious murmur of the times, and despite the bewilderment and outrage, it was clear (even to the *New York Times*) that something was happening: the first audible rumble of an immense underground river that had been building in volume and force over the years."[307] During that infamous reading, the walls of the Six Gallery hosted a suite of mostly black and white abstract paintings by the young Filipino-American painter Leo Valledor. It was, to use the parlance of the Beats, a real scene.

When looking at the abstract geometric paintings of Leo Valledor (1936-1989), one might assign musical terms similar to those employed by critics in writing on Poons's dot paintings. As with Poons, adjectives such as "vibratory," "rhythmic," and "lyrical" come to mind as a viewer experiences the visual effects rendered in his paintings. The one overarching descriptor, "harmonic," illustrates probably the most consistent sensation evoked by Valledor's painting, in which he achieves harmony through color. As he wrote in a statement for the Park Place Gallery in New York in the 1960s, "I see color as space.

[306] Allen Ginsberg, *Howl and Other Poems* (San Francisco: City Lights Books, 1956), 9.
[307] John Clellon Holmes, "Unscrewing the Locks: The Beat Poets," *Poets of the Cities of New York and San Francisco, 1950-1965*, ed. Neil A. Chassman (New York: E.P. Dutton and Company, 1974), 67.

All of my paintings since 1962 are based on my harmonic (color vibration) ideas . . . . "[308] And as Claudine Humblet states, "Valledor was obsessed with a certain idea of the structural kinship between music and color."[309] The process of working with color to create a subtle visual-musical harmony results in a body of work that appears perpetually fresh. This section of the chapter will consider works made between 1955 and 1967, comprising three compositional styles: gestural abstraction in San Francisco, monochromatic works with dots made during the early Park Place years, and his series of "zig-zag" paintings from 1964 to 1967. It will end with a longer reading of a particularly evocative zig-zag painting, *Quintessence (for Edgar Varèse)* (1966), and the musical contexts for the work.

Valledor seemed to have worked in a musical mode his entire career. Born in poverty in San Francisco in 1936, he attended the California School of Fine Arts, now called the San Francisco Art Institute, from 1953 to 1956. In the 1950s, he created three series of works, "Compositions," "Jazzus," and "Black and Blue," that seemed to interpret some of his ideas of jazz music (Figure 2.28). Valledor's abstract gestural style came out of his interest in Paul Klee, Arshile Gorky, Mark Tobey, and Bradley Walker Tomlin.[310] He showed work at the Six Gallery every year from 1954 to 1957 and exhibited at the Dilexi Gallery in 1958 and 1959. He moved to New York in 1961, becoming a founding member of the ten-person collective called the Park Place Gallery

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[308] Leo Valledor, "Statement," 1965, n.p. Park Place Gallery Art Research, Inc. Records, Archives of American Art, Smithsonian Institution, Washington, DC.
[309] Claudine Humblet, *The New American Abstraction, 1950-1970* (Milan: Skira, 1997), 1903.
[310] Paul J. Karlstrom, "Postwar California: Asian American Modernism," in *Asian American Art: A History, 1850 - 1970*, ed. Gordon Chang, Mark Dean Johnson, and Paul J. Karlstrom (Stanford, CA: Stanford University Press, 2008), 251.

Group, which operated in two different gallery spaces until its closing in 1967. Valledor returned to San Francisco in 1968.[311]

Valledor's friend and former colleague at the experimental Park Place Gallery in New York, Dean Fleming, recalls that he first encountered Valledor playing the bongo drums in the courtyard at the California School of Fine Arts in the 1950s. Fleming noted that Valledor made some of the "Black and Blue" musical paintings, a series that was exhibited at the Dilexi Gallery and the Six Gallery in San Francisco, while listening to bebop jazz. When asked of his interest in abstraction in a 1981 interview with Fleming, Valledor explained, "One of the main reasons why I turned to abstract expressionism was that I could spontaneously improvise like a jazz musician. The gestured linear brushstroke was like a melody executed in rhythmic calligraphy. Now I feel much more like a composer."[312] Mentioning the pioneering work of Kandinsky, Klee, and Josef Albers using color with musical intentions, Valledor further elaborated, "It seems to me that the color spectrum is a visual analog to musical scales (the chromatic scale?) . . . . Combinations of colors are like visual chords, producing consonant or dissonant spatial harmonies."[313] Here, Valledor envisions a direct relationship between color harmonies and musical chords. His questioning of his own use of the term "chromatic scale," however, further enforces that this analogy is one that he felt only intuitively. In this way, he assigned a decisive purity to this relationship.

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[311] Linda Dalrymple Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York* (Austin, TX: Blanton Museum of Art, 2008), 114. I am grateful to have served as Professor Henderson's research assistant in preparation for the Park Place exhibition at the Blanton Museum of Art. Working on this exhibition allowed me to do significant research on Valledor for the catalog.
[312] Leo Valledor, "Interview: Leo Valledor," by Dean Fleming, *Ocular* 6 (Fall 1981): 27.
[313] Valledor, "Interview: Leo Valledor," by Dean Fleming, 27.

Valledor's endeavor to use painting in a way analogous to music grew in part from the fact that Valledor never had the opportunity to study music formally. As his son Rio Valledor has written, "He would play Pharaoh Saunders as my lullaby and Nina Simone as Sunday gospel. He played the sax 'freely' but couldn't read music . . . so he invented his own notation."[314] Valledor's lack of formal musical training did not stop him from picking up drums and saxophone. Unlike someone like La Monte Young, however, his lack of professional training may imply a simplified understanding of the nature of spontaneity and improvisation in jazz musicianship as Beat-styled "stream of consciousness" with sound or paint. However, this may not have been the case at all; he very well could have simplified his ideas of music for the sake of his interview with Fleming. His notions of improvisation, however vague in his explanation, express a certain freedom in associations with music.

Valledor's earliest gestural drawings and paintings from 1955 and 1956, his "Compositions," are black-and-white abstractions that lack a centered compositional structure. He painted many of these ink-on-paper paintings on smaller cut circles of paper under two feet in diameter, making them fairly portable if painted in a live music setting. The majority of them, however, most likely emerged from Valledor's experience with recorded versions of the songs, which means that they are improvisations upon purely aural experiences. With works such as *Shake, Rattle, and Roll* (1955), whose title references the 1954 rhythm and blues song made famous by both Big Joe Turner and Bill

[314] Rio Rocket Valledor, "Zoot Sutra (song for my father)," *That Good Good* (blog), January 19, 2005, http://riogood.blogspot.com/2005/01/zoot-sutra-song-for-my-father.html. Accessed April 29, 2005.

Haley and His Comets, Valledor painted as he listened (Figure 2.29). The resulting motifs come from his own impressions of different parts of the song.

The "Compositions" ushered in Valledor's next series of paintings, "Jazzus." Fleming recalls seeing the "Jazzus" paintings, first exhibited at the Six Gallery in 1956. He wrote of them,

> . . . [They were] large screens of thick paint strokes of different colors whose titled were specific tunes mostly by Charlie Parker and other jazz greats. When a painting was viewed while listening to the specific tune of the title[,] the vision was enhanced and the painting entered the eye like a dance.[315]

Although Fleming makes reference to "different colors" in this interview, he recalls that they were mostly black and white with some blue and green.[316] Intuiting the sound as movement in space, Valledor created these works in a process similar to that employed by Arthur Dove, Stuart Davis, and even Jackson Pollock, using the rhythms (or, in some cases, the arrhythmic beats) of the music as a guide for the gestural placement of forms on the canvases.[317] What resulted was a series of dark but highly expressive paintings that seemed to embody a contradiction: the fire and fury of bebop encapsulated within the austere boundaries of dark tones.

Later gestural works employed even less color, particularly in the "Black and Blue" series, which may reference the Louis Armstrong song "(What Did I Do to Be So) Black and Blue," recorded in 1929. These works, such as *Whose Blues?* (1958), the title of which comes from a West Coast jazz song of the same name released by Lennie Niehaus and his quintet in 1954, have a limited color palette of blacks, blues, and a bit of white (Figure 2.28). Paul Karlstrom writes that the "Black and Blue" series "[reflects] his

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[315] Valledor, "Interview: Leo Valledor," by Dean Fleming, 27.
[316] Dean Fleming, interview with the author, Austin, TX, April 2011.
[317] *Ibid.*

identification with black culture and music."[318] Valledor's widow, Mary Valledor, explained this cultural use of color designation by stating that, as a child, Valledor grew up in a racially mixed neighborhood. When asked if his Filipino ethnicity had much to do with his work, Valledor would reply that he identified more with African-American culture and "he did not want to be known as an Asian painter."[319] In this way, the musical reference to the color blue likely indicates a tribute to blues music as well as jazz. Formally similar to the earlier "Compositions" series, Valledor uses a circular motif in *Whose Blues?*; however, where he painted the earlier works on circular cuts of white paper, the composition of this painting itself has a centered circular composition on a black background. Imagining this work as the result of listening to a blues lick on guitar or piano, the sound seems to emanate from the center, like a building ball of energy. Like much jazz and blues music, the title *Whose Blues?* itself seems to play with a "call and response" sequence. One asks "Whose blues are these?," or maybe "Who has the blues?," or even "Whose music is blues music?" and the responses might vary. One might say that these are Valledor's blues and that this is his way of composing music. Or perhaps, referencing his ethnically mixed neighborhood, he means to quell any notion that specific music "belongs" to anyone in particular, marking its universal appeal. As Louis Armstrong famously quipped of the human desire to make music, "All music is folk music. I ain't never heard no horse sing a song."[320]

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[318] Karlstrom, "Postwar California: Asian American Modernism," 251.
[319] *Ibid.*, 252-253.
[320] Lawrence M. Small, "All Music Is Folk Music," Smithsonian Magazine, last modified July 2004, accessed July 2014, http://www.smithsonianmag.com/arts-culture/all-music-is-folk-music-2580774/. I believe that La Monte Young would disagree with the idea that horses don't sing songs. After all, even butterflies make music.

Valledor's Dots: Early Minimalism

Music played an incredibly important role in the functioning of the Park Place Gallery, which had been founded in a multi-story building on Park Place. After losing that space, the group incorporated as "Park Place: The Gallery of Art Research, Inc." and reopened in fall 1965 at 542 West Broadway. According to Fleming, the five painters and five sculptors envisioned Park Place as an intermedia space where poetry and music lived alongside the visual arts. Deeply engaged with concepts of expanded consciousness and synesthesia, Fleming referred to these multisensory exchanges at Park Place as "painting [and sculpture], poetry, music knit together."[321] The group also created work while listening to the free jazz of Ornette Coleman—at one time planning to have him serve as their music director—and played their own version of free jazz in their improvisational gallery band (Figure 2.30).[322]

As with Young and Riley, Minimalist composer Steve Reich, a friend of Fleming from the composer's days as a student at Mills College, had also relocated to New York from the Bay Area. It was at Park Place, during a concert on May 29, 1966, that Reich first performed some of his phased music work, wherein he used repetition of musical parts, but changed the tempi, creating overlap and overtones.[323] Owing to advances in electronic music and spliced tape recordings, Reich later experimented with recorded phasing on tape. He exhibited in the Park Place show "Dean Fleming Primal Panels / Charles Ross Prisms and Lenses / Jerry Foyster Mirrors / Steve Reich Continuous Tape

[321] Dean Fleming, telephone interviews with Linda Henderson, February 2, 2002 and August 31, 2002.
[322] Dean Fleming, interview with the author, Austin, TX, April 2011.
[323] Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York*, 82. For a discussion of the use of the fourth dimension at Park Place, see Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York*, 18, 25, 35-41.

Music" in March of 1967. During that exhibition, Reich performed three consecutive nights of phased music in a concert series titled "Four Pianos: Three Evenings of Music by Steve Reich."[324] Reich notes that he first met composer Philip Glass at the second of these three concerts, evidence of the extent to which musicians and artists comingled at Park Place.[325] As discussed later in the chapter, Valledor's exposure to new and avant-garde music, and especially electronic music, seems to have opened a new musical source beyond jazz. As I will argue in the next chapter, the musical environment of Park Place similarly affected Sol LeWitt's ideas of musicality in his work after his October-November 1966 exhibition with Valledor and Robert Smithson at the Park Place.

Valledor, who had begun a deeper Zen practice after he moved to New York in 1961, started making much more simplified works after repeated viewings of paintings by Mark Rothko and Barnett Newman.[326] Unlike many contemporary painters working in the area of optically oriented art, Valledor did not fixate on the use of extreme color combinations that created virtual movement in the eye's retina, and in fact, the Park Place group never associated themselves with Op Art. Instead, Valledor painted with the intention of intuiting the abstract, illogical, and sensorial traits of music through what he called "four-dimensional color." By this, he meant not only color in volumetric space, but also as experienced over time. His work at Park Place showed a reduction of formal elements and a more rigid geometric style. But, as Paul Karlstrom points out, the work was not content-less because " . . . the minimalism Valledor embraced and made his own is rich in human implications, a vehicle for his desire to bring order and meaning to his

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[324] *Ibid.*, 84.
[325] Steve Reich, *Writings on Music, 1965-2000* (Oxford: Oxford University Press, 2002), 16.
[326] Karlstrom, "Postwar California: Asian American Modernism," 252.

life."[327] Ironically, one of these elements of order in his life was the very disorderly music in the worlds around him. Judith Dunham wrote in 1973, "His paintings consist of pure, pristine forms and colors, garnering their meaning from inner content and the viewer's own perceptual associations."[328] In this way, the "inner content" of musical harmony as four-dimensional color may or may not become evident to the viewer.

In some works, Valledor seems to explore silence, a counterpoint to sound. Humblet identifies this tendency for one of Valledor's early works created at Park Place, a 1963 painting titled *Becoming*, by arguing that the small solitary dot of color in the center creates a "silent," and therefore musical, focal point (Figure 2.31).[329] This paring down of compositional elements in a meditative framework resulted in Karlstrom's referring to *Becoming* as "Valledor's masterpiece of contemplative reduction."[330] If one considers this dot as a compositional structure, it is not a stretch to think of its functioning in the same way that composers use rests, usually visualized as small solid squares or rectangles upon a staff line, to designate a pause or an instance of "silence" within a musical score. Like Poons's *Euthalia*, though, *Becoming* also possesses some sonic ambiguity. While Humblet interprets the blue-green spot as silence, one could also read the dots as notes of sound within a silent field, especially in *Becoming*, in which Valledor has put the single light green dot against an inky blue-green background. The color guides this interpretation, as one might more readily intuit darkness as silence. This "note" involves a paradox: it is simultaneously jarring and calming in its Zen-like

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[327] *Ibid.,* 252.
[328] Judith L. Dunham, "Leo Valledor: Paintings," *Art Week* 4 (November 1973): 3.
[329] Humblet, *The New American Abstraction, 1950 – 1970*, 1903. Valledor's gallery, the Togonon Gallery in San Francisco, refers to this work as an untitled painting.
[330] Karlstrom, "Postwar California: Asian American Modernism," 252.

solitude. It is up to the viewer to unravel this paradox through his or her own reading. According to Karlstrom, this "confrontation" of dot and dark field results in "the void supporting a single spot of light . . . a Zen-derived metaphor for life."[331]

A later dot painting similar to *Becoming*, a work titled *Earth Sign*, uses a similar compositional technique with the dot about a third of the way down from the top of the canvas. Here, however, he has placed a very faint rectangle below it, about a third of the way up from the lower edge of the canvas (Figure 2.32). Like a further reduced Rothko, *Earth Sign* has a deep reddish-brown base with a thin silvery edging. Valledor has allowed the red paint to drip into the bottom edge of silver, leaving a gestural or indeterminate trace. The rectangle has a tonal hue almost indistinguishable from the red-brown ground. Suzaan Boettger wrote of the use of color, "The colors, instead of the brilliant, blinding complementaries of op art, are deep tones appropriate to a painting called *Earth Sign*."[332] In this case, one might "read" the motifs as a note and then a rest. As a focal point, these dots, which Valledor used in other paintings both in the center and at both ends, retain the viewer's gaze as a visual pause. Valledor therefore invents a visual system that mimics the aural complexity of silence.

"Everything Pellucid": Valledor's Zig-Zag Paintings (1964 to 1967)

Around 1964, Valledor began making large-format horizontal paintings with a compositional motif that he referred to as "zig-zags." Although he initially explored shaped canvases in 1964 and 1965, he returned to a rectangular format for the zig-zag

[331] *Ibid.*, 252.
[332] Suzaan Boettger, "Geometric Surfaces with Illusory Depth," *Art Week* 11 (August 1980): 5.

paintings of 1966 and 1967 in order to dispel notions of his work as similar to sculpture and to continue the exploration of spatial illusion on a more two-dimensional surface.[333] One can easily see why he used the moniker "zig-zag" for the works, but the term itself may be a misnomer because they do not always create the fluid back-and-forth motion that the concept implies. Critics seemed to have a more difficult time pinpointing the form exactly. According to poet Ted Berrigan, writing for *Art News*,

> . . . [The paintings] consist simply of a number of bands of color juxtaposed in a manner that seems intuitively correct. His only 'trick,' to zigzag one of the bands, somehow is responsible for all kinds of miracles, conjuring up, in different paintings, sky, a summer afternoon, twilight, blue sea, mist, and everything pellucid.[334]

Donald Judd, reviewing Valledor's work at the Daniels Gallery in 1965, referred to the zig-zags as "horizontal parallelograms . . . composed of long fast V's."[335] Michaël Amy, reviewing a 2007 show of Valledor's work at the Mitchell Algus Gallery, stated that, in the zig-zag paintings, " . . . flat, horizontal blades of one color on the left alternate with those of another color on the right; all are of equal height and stretch the width of the canvas, filling the entire field."[336] Finally, David Bourdon, writing about the Park Place

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[333] For more on Valledor's retreat from creating shaped canvases, see Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York,* 17-18. Explaining his rectangular canvases of 1966, Valledor stated, "I feel that the logical conclusion of the shaped canvas is sculpture" (Grace Glueck, "ABC to Erotic," *Art in America* 54 (September - October 1966): 107.)

[334] Ted Berrigan, "Leo Valledor," *Art News* 65 (October 1966): 65. Berrigan's conjuring of summery images seems unusual given the timing of his review.

[335] Donald Judd, "New York Letter," *Art International* 9 (April 1965): 78. This show, "4D," was held at the Daniels Gallery while the Park Place Group was between gallery locations.

[336] Michaël Amy, "Leo Valledor and Mario Yrissary at Mitchell Algus," *Art in America* 95, no. 3 (March 2007): 178.

Gallery in the *Village Voice* in 1965, had referred to these works as "frieze-like," indicating their stretched horizontality.[337]

Some of the zig-zag paintings, in addition to using the sharp diagonal lines, also incorporate dots of color. Judd, taking note of these works in January of 1964, writes that the incorporation of six "minute" dots in the painting *Constellation* (1963), on view in late 1963 at the Park Place Group Show at their original location at 79 Park Place, makes the work "more unusual" than other hard-edge painting at the moment, as well as "exceptional."[338] Instead of allowing the eyes to wander from one geometric form to another, the placement of the dots at the peripheries of the visual field tend to both help center vision while, at the same time, pushing it toward the edge. Valledor's *Serena* (1964), a work with two panels on three-inch stretchers, shows Valledor moving into the realm of shaped canvases (Figure 2.33). Linda Henderson has written that this work's deeper width, mitered corners, and painted parallelograms "create a powerful spatial illusion, which is made more pronounced by the contrast of warm versus cool color for the top stripe in each painting."[339] The four dots of each painting, occurring at the center of the cardinal directions of orientation, are different, mostly cool colors. On the top panel, a light blue dot rests in the center of the golden parallelogram, achieving a similar optical effect to Poons's *Euthalia*. The other three dots, in red, lavender, and dark blue, do not operate with the same tingling optical urgency. The right and left dots appear initially as existing on the same horizontal plane, but the left is just a hair higher. The

[337] David Bourdon, "Park Place: New Ideas," *The Village Voice* (November 26, 1965): 11.
[338] Donald Judd, "79 Park Place," *Arts Magazine* 38 (February 1964): 23.
[339] Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York,* 17.

dark blue dot becomes nearly imperceptible against the lower maroon parallelogram. Likewise, in the lower panel, the red dot in the blue upper band almost does not register visually. The red and lavender dots of the central green band, like those in the top panel, appear in line, but are not. The dark blue dot against the lighter maroon stripe on the bottom appears somewhat more vibrant. The dots function as optical devices that enhance the spatial illusion of the work. In keeping the eye from settling on a focal points, they assist with the perception of the work shifting from two to three dimensions and back again, making it difficult to fix the work in space. Musically, these dots may represent Valledor's personal notation system of notes of a melody against the harmony of the geometric bands. One could read them as a kind of self-contained score where the solid gaps between notes or chords represents a parcel of time needed for viewing (or "listening").

Time serves a critical function for the experience of Valledor's painting, just as it does in music. All paintings are experienced over some duration of time; however, what makes Valledor's use of time unique is that, as an active agent, time dictates the viewer's understanding of the sensorial qualities of his work. He writes, "In flat painting the balance of actual form (two dimensionality) and illusory space (volume) may be thought of as resting upon a time axis."[340] This use of time as a function of experiencing his painting is, not coincidentally, very similar to the way that a listener apprehends music. For example, the rectangular zig-zag paintings made after 1966, such as *The Calm*, seem to ask the viewer to read them almost as a score for a musical composition (Figure 2.34). This work has more of a true zig-zag shape created by the black and royal blue diagonal

[340] Valledor, "Statement", n.p.

bands. In it, the pointed parts of the forms extend all the way to the other end of the canvas and there appears to be a rigid symmetry employed. The upper and lower black bands, along with the middle blue band, appear as totally straight edges, perhaps an intuitive sensation on the part of the viewer. The blue seems to make a "Z" against the black and its brightness pulls it forward. In this work, the eye most likely moves from left to right and back again in the viewing process.

A problem arises in attempting to read these as a traditionally notated score, where a musician reads from left to right for each staff. One method of approach for Valledor's paintings is to begin at the left side, as one would in reading a Western book, and scan progressively and slowly toward the right in one phase. This method works because of the shape of the rectangular canvases as a single object, like a long frieze. In this case, the painting could operate as a single staff. If moving rapidly, however, the eye might just as easily move from left to right and then from right to left with a bouncing motion. In this way, the viewer receives the geometric forms of the composition as individual parts of a larger whole, much like the notation in a musical score. The lines of the zig-zag become the staves of a composition. Reading a score uses both slow reading and rapid movement of the eye. As a musician plays with the designated tempo from left to right, but once the eye hits the right end of the staff, it quickly shifts back to the left, like a typewriter.

Grace Glueck, reviewing the zig-zags on view at the Graham Gallery in 1966, wrote that the "forms seem to be the paradigm of jet-age speed."[341] David Bourdon states that this process of looking " . . . [shunts] the eye from side to side with high velocity,

[341] Grace Glueck, "ABC to Erotic," *Art in America* 54 (September - October 1966): 107.

forbidding it any resting point except at the periphery of the canvas."[342] However, it may not be the case that the viewing is uniformly quick; a musical interpretation would allow for some slow reading from left to right and some fast reading from right to left. In this way, looking at the paintings creates a discomfort through retinal fatigue and many viewers probably respond by turning away or shutting the eye, effectively truncating the temporal experience. With a zig-zag painting, given the more muted color palette, the experience of an after-image becomes less likely. In a Poons dot painting, the after-image is often a result of optical light coming from opposing color combinations, but Valledor's muted palette avoids that sensorial juxtaposition.

Additionally, Valledor writes that the zig-zag motif attracted him with its " . . . symmetric / asymmetric properties, the range of light vibration along its tapers, and the interchange of parallels . . . joining two colors".[343] It is, therefore, an illogical system that *appears* logical and rational by its crisp geometry, but actually invites the viewer to intuit the visual system in an improvisational manner over time. In Berrigan's words, the system seems "intuitively correct" even though the paintings almost certainly employ some asymmetry. The motif also engages the kinetic retinal effects of Op Art to some degree. According to Amy, " . . . the zigzag motif . . . creates a flickering sensation,

[342] Bourdon, "Park Place: New Ideas," 11. Bourdon further asserts, "Valledor is interested in leading the eye off the canvas, finding that the shape does funny things ('space warp') when looked at from an angle …". Although this might represent Bourdon's experience of the works, it does not reflect mine. I find that the zig-zags keep my eyes inside the canvas, rather than pushing my vision outward. Because of their extreme width, the edges are in my peripheral vision, which helps contain the image. In looking at the works "from an angle," Bourdon ostensibly means as one walks past, creating a vector in one direction with the body as the optical apprehension of the zig-zags forces a dually directional experience. I maintain that this method of looking is still a time-based endeavor.
[343] Valledor, "Statement", n.p.

making the . . . blades appear to vary in tone – though they do not."[344] Lucy Lippard wrote in 1966 that the vibrations perceived in the zig-zag paintings are subtle and allow for "spatial flexibility," because Valledor uses color "structurally, to expand and test the boundaries between forms instead of destroying them."[345] The colors interact with one another the way that a melody and bass line do in music, creating a harmony. In this way, one might read many of his paintings as attempts to illuminate, and possibly complicate, the ineffable qualities of music.

Quintessence and Edgard Varèse

Valledor's painting *Quintessence (for Edgar Varèse)*, a 1966 work dedicated to the avant-garde French composer who pioneered the creation of sonic sculpture, represents a musical point of departure for Valledor, an ardent jazz fan (Figure 2.35). In this case, the painting witnesses an Asian-American artist paying respect to a French avant-garde musical source, another instance of a trans-Atlantic musical encounter between an artist and a composer. One might logically ask why Valledor admired Varèse's work at this moment. First, Varèse had died in November of 1965, so the painting acts as something of a memorial. More importantly, the 1950s had witnessed a career revival for Varèse, whose radical musical concepts of the 1920s had rendered him a virtual outcast until the electronic technologies of the 1950s caught up to his vanguard ideas. Varèse, the antithesis of the Serialist composer and one of the earliest visionaries for the possibilities of tape music, had long dreamed of making sound into a viable entity of physical space. The composer felt that conventional Western musical instruments

[344] Amy, "Leo Valledor and Mario Yrissary at Mitchell Algus," 178.
[345] Lucy Lippard, "New York Letter," *Art International* 10 (January 1966): 91.

could not achieve this spatialization adequately. Reich, who exhibited at Park Place in 1967 and developed his phasing techniques during that time, in many ways inherited the concepts of spatialized sound espoused by Varèse.[346]

Starting in the late 1940s, new technologies allowed many avant-garde composers in the United States and Europe to do things with sound that were previously unheard of in new music. Often eschewing the traditional orchestra-driven concert, composers began using new recording devices and tape manipulation to create music made for public consumption, but also unfettered by the reliance on the live performance of musical instruments. This earliest electronic music, now called *musique concrète*, used both naturally occurring and mechanically produced sounds and relied on the composer's complete mathematical control of various factors in musical production, such as pitch and timbre. Parisian composers Pierre Schaeffer and Pierre Henry first developed *musique concrète* in 1948 by using several phonographs that played recorded music simultaneously. By 1950, with the invention of magnetic tape, *musique concrète* relied on the physical manipulation of tape recordings of sound.[347] Soon, electronic music laboratories cropped up in major cities such as San Francisco, New York, Paris, and Cologne. Often aligned with the radio broadcasting systems of these cities, electronic music labs made engineers out of composers and vice versa.

Varèse, who completed fewer than fifteen compositions throughout his lifetime, identified himself not as a musician, but as someone who worked with sound. He often

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[346] For a background on Varèse's development of spatialized sound, see Olivia Mattis, "Edgard Varese and the Visual Arts" (Ph.D. diss., Stanford University, 1992) and sections on Varèse in Linda Dalrymple Henderson, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*, revised ed. (Cambridge, MA: The MIT Press, 2013).
[347] Elliott Antokoletz, *Twentieth-Century Music* (Englewood Cliffs: Prentice Hall, 1992), 448-449.

referred to his music as "organized sound" and called himself a "worker in rhythms, frequencies, and intensities."[348] As early as 1925, Varèse articulated theories on creating a "sound mass" in space whose rhythms transport it through time. According to Olivia Mattis, it is no surprise that composer Igor Stravinsky called Varèse the "musical Brancusi" due to his efforts to make a "musical object projected into space."[349] Discussing the phenomenon of sound waves traveling through space, Varèse used the term "spatial projection" and likened sound to beams of light emanating through space from the source of a powerful searchlight.[350] Works such as nineteenth-century mathematician Josef Hoëné de Wronski's *Esthetics of Music*, which Varèse read as a student at the Paris Conservatory, inspired his concept of spatial music, where "bodies of intelligent sounds [move] freely in space."[351]

Varèse began composing one of his earliest major works, *Hyperprism*, in 1922. This four-minute long work for wind instruments and percussion found Varèse experimenting with the projection of sound into space by using periods of intense crashing sounds made by the percussion instruments, including cymbals, alternated with the melody of the wind instruments played at a single pitch that changed erratically in rhythm.[352] This aggressive work caused riots at concert halls when it was first performed in 1923. At the time, the music critic for the *New York Times* referred to Hyperprism as "a catastrophe in a boiler factory."[353] As Varèse historian Malcolm MacDonald has

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[348] Mattis, "Edgard Varèse and the Visual Arts," 124.
[349] *Ibid.*, 159-160.
[350] *Ibid.*, 187-188.
[351] *Ibid.*, 189.
[352] Malcolm MacDonald, *Varèse: Astronomer in Sound* (London: Kahn and Averill, 2003), 153-155.
[353] Alan Clayson, *Edgard Varèse* (London: Sanctuary Publishing, Ltd., 2002), 102.

noted, the title of *Hyperprism* ties the work together conceptually. Geometrically, a prism is a three-dimensional polygon that possesses at least two parallel and identical sides. A hyperprism, then, theoretically extends into any number of dimensions above three. Linda Henderson has written that Varèse formed his concepts of musical geometry and his general interest in higher dimensions through an association with New York artists, including Marcel Duchamp, in the first quarter of the century.[354] Thus, according to MacDonald, Varèse's use of the title *Hyperprism* alludes to the idea of projecting sound into vast space "with a musical idea of a few notes coming to occupy all the available dimensions just as the 'unit'—'the smallest groupings of atoms that has the order and composition of the substance'—extends into space as the growth of a crystal."[355] In the January 1925 issue of *The Arts*, Massimo Zanotti Bianco published his article "Edgar Varèse and the Geometry of Sound," in which he initiated the idea of a spatialized sound. Bianco writes:

> If we project an imaginary sound-mass into space, we find that it appears as constantly changing volumes and combinations of planes, that these are animated by the rhythm, and that the substance of which they are composed is the sonority. Might it then be possible to consider a musical composition as a succession of geometric sound-figures? . . . . The movement of these masses is given by an original use of the percussion group . . . . It penetrates the sound-masses, making them pulsate with a thousand varied and unexpected vibrations . . . . "[356]

Varèse realized his concept of spatialized sound most fully with his work *Poème Electronique*, composed for the 1958 World's Fair in Brussels (Figure 2.36). *Poème Electronique* was a feature of the Philips Electrical Company's Pavilion, commissioned

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[354] Linda Dalrymple Henderson, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art* (Princeton, NJ: Princeton University Press, 1983), 224-225.
[355] MacDonald, *Varèse: Astronomer in Sound*, 154.
[356] Henderson, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*, 226.

in 1956 and created by the renowned French architect Le Corbusier (Charles-Edouard Jeanneret) and his then-assistant, the Greek architect and composer Iannis Xenakis (Figure 2.37). Le Corbusier envisioned the Philips Pavilion as a combination of light, sound, film, sculpture, and architecture; he called this "electric art."[357] Because Le Corbusier spent the majority of 1957-1958 in India, working on the development of the city of Chandigarh, Xenakis took over the direction and architectural plans for the pavilion.[358]

Xenakis, who like Varèse was also deeply engaged with mathematics, designed the exterior of the pavilion in the "shape of a three-peaked circus tent."[359] Loosely based on Xenakis's musical composition *Concret PH* of 1958, the interior architecture featured what Xenakis called "hyperbolic paraboloids," or sharp curves along which Varèse's music was projected. In a corner of one of the hyperbolic paraboloids, Xenakis erected what he called a "mathematical object," a geometric octohedron with smaller polyhedroids inside, onto which he projected ultraviolet light (Figure 2.38).[360] Le Corbusier had asked Varèse for a composition of exactly 480 seconds, or eight minutes, in length; this commission became *Poème Electronique*. Varèse prepared for the creation of *Poème Electronique* by attending classes at Columbia University's Electronic Music Lab, where he learned about new electronic equipment manufactured by Philips and other companies.[361] Using magnetic tape recording, Varèse composed *Poème Electronique* as a shimmering work that featured percussion, bell tones, and silences, with which he

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[357] Mattis, "Edgard Varèse and the Visual Arts," 247.
[358] *Ibid.,* 372.
[359] *Ibid.*, 372.
[360] Marc Treib, *Space Calculated in Seconds: The Philips Pavilion* (Princeton, NJ: Princeton University Press, 1996), 92-96.
[361] Alan Clayson, *Edgard Varèse* (London: Sanctuary, 2002), 168-169.

imagined the sound space enveloping the audience inside the pavilion. On the interior of the structure, Le Corbusier and Xenakis projected film and light displays as *Poème Electronique* soared around the space on 425 speakers connected on a sound board of 180 control signals. The music rushed erratically around the hyperbolic paraboloids from speaker to speaker, creating surround sound in its most literal sense. With the longitudinal waves of the sound interacting at several points within the pavilion, the clusters of sound waves created sound sculptures that pulsated invisibly in three dimensions and, through vibrations, became palpable to the human body. Because the Philips Pavilion held 500 people at a time and Varèse's eight-minute piece was repeated between thirty and thirty-two times daily over the course of the six-month World's Fair, historians estimate that about two million people experienced the multimedia sonic space.[362]

Valledor's *Quintessence*, then, pays homage to a composer who spatialized sound through the use of geometric figures in space. The "quintessential" experience of a Varèse composition involves feeling music in three or more dimensions, as one would in the Philips Pavilion. Valledor's painting, if read in the terms of the music of its title, gives no point of entry or departure. At ten feet long, its right and left edges likely sit in the peripheral vision of the viewer, even at a viewing distance of seven or eight feet. Along with his Park Place colleague Ed Ruda, whose paintings also used extreme horizontal formats, Valledor engaged with ideas of the peripheries of vision. One could approach the paintings visually from any direction, but probably from the left or right; additionally, the use of diagonals lends the painting a sense of dynamism. Instead of

[362] MacDonald, *Varèse: Astronomer in Sound*, 373-374.

reading the painting strictly from left to right, as one might in a traditional score, the eye has the freedom to bounce from right to left with some velocity. The colors are saturated and somewhat somber. The blue tone on the left does not necessarily register a strong contrast to the inky green-black on the right until the viewer's eyes begin to move back and forth horizontally, attempting to find a focal point on which to center vision. The zig-zags, then, are intertwined attenuated triangles of these two colors. Each narrow point, located at the sides of the canvas, seems to pierce the opposing color field. This viewing experience is conceptually close to what one might imagine of the experience of the no longer extant Philips Pavilion. Just as the sounds presented in *Poème Electronique* rushed sequentially through the hundreds of speakers spaced throughout the walls, creating harmonic tone clusters where tones collided, the zig-zags of *Quintessence* similarly mimic this experience with color, hard edges, and the geometric forms.

Ultimately, one of the most significant aspects of Valledor's work is that he was able to weave together paradoxical and illogical elements to create a single total harmony within each work. Just as one embraces the hard-edged and seemingly logical geometry of his compositions, one is struck by their asymmetry and dynamism. And just as some seem to sing out with exuberant color, others appear to have more of a stoic tranquility. As with the jazz and avant-garde music that Valledor so greatly admired, he embraces creative challenges of consonance and dissonance, tempo, rhythm, and harmony on the surface of each canvas.

The dots function very differently for Poons and Valledor. While Poons organized them in large numbers into a strict system on a grid, Valledor uses dots economically to destabilize the viewing experience. They became the central aspect of Poons's paintings

in the period, but in Valledor's work, they are a supporting formal device that aids the use of four-dimensional color and line. Poons uses bright colors to create paintings that seem to sing or rattle with their optical color juxtapositions, where the dots appear to separate from their background. Valledor, by contrast, uses small dots that have little tonal differentiation from their ground; in doing so, his works create a strong spatial illusion of "warping" between two-dimensionality and three-dimensionality on various planes, an illusion not present in Poons's dot paintings. Lastly, while music, poetry, and Zen are sources for both painters, Poons approaches them intellectually while Valledor has a more emotional and personal adaptation of these ideas as the content of his work. Yet, in spite of this fundamentally different approach, they both created paintings that engage the senses and intellectual dynamics of the viewer on a wide variety of levels.

Chapter Three: Karlheinz Stockhausen, *Die Reihe*, and Sol LeWitt's Serialism

"Serialism has a certain place in the plastic arts, though I can cite no examples of it. There are, however, indications that it may come about. It is not surprising that there are as yet no examples, when one remembers that music has only been concerned with the serial idea for a short time and then even here there are as yet very few examples. Similar is the situation in the world of painting. Here the serial idea is the youngest and has hardly yet taken route. We see great possibilities for it, when we remember that in the new music we utilise colour as an aid to the understanding of our quantities and proportions."
- Paul Gredinger, "Serial Technique," *Die Reihe*, 1955[363]

"We are all more or less treading on ice, and as long as this is the case, the organizational systems being put forward represent guidelines to keep the composer from faltering. And one has to face the fact that there are as many systems as there are grains of sand, systems that can be dreamed up and set in motion as easily as clockwork . . . . Still fewer are so perfectly prefigured that they yield beautiful and interesting music."
- Karlheinz Stockhausen, *Texte i*, 1953[364]

Introduction

In the realm of postwar music, few figures have been as influential or divisive as the German composer Karlheinz Stockhausen (1928-2007). His music theories, read widely through their publication in the journal *Die Reihe*, which he co-edited with composer Herbert Eimert in annual issues from 1955 to 1962, have been widely noted for both their opacity and their reflections of cosmic mysticism. Stockhausen, an heir to the total serialist methods coming out of the dodecaphonic music of the Viennese School of the earlier twentieth century, Arnold Schönberg, Alban Berg, Anton Webern, and their students, was also a pioneer of early electronic music. Despite his rigid adherence to process and system within each composition, Stockhausen also had a reputation as a student of metaphysics, and particularly a metaphysics of sound.

[363] Paul Gredinger, "Serial technique," *Die Reihe* 1 (1958): 44.
[364] Karlheinz Stockhausen, *Texte* i (Cologne: DuMont, 1963), 47

Stockhausen was born near Cologne in 1928 and had taken classes with Theodor Adorno in Darmstadt before moving to Paris to study under *musique concrète* (early electronic tape music) luminaries such as Pierre Schaeffer, Pierre Boulez, and Olivier Messiaen at the Paris Conservatoire. Like Leo Valledor, Stockhausen felt a conceptual affinity with the French composer Edgard Varèse, although far more deeply; in Stockhausen's case, it was more sustained and even seminal. Stockhausen rose to prominence several decades after Varèse and, in many ways, shared some of the elder composer's chief musical concerns, particularly in creating sound spaces. Stockhausen had befriended the septuagenarian Varèse in the late 1950s, and in 1972, seven years after Varèse's death, Stockhausen commented, "Varèse had great ideas . . . . During his last ten years or so, he was apparently more interested in astronomy than in music. He went to see a scientist friend of his in an observatory in order to watch the stars. Varèse's concepts went really far beyond his technical means."[365]

For Stockhausen, this interest in space and the spatialization of sound became focused through the lens of cosmic metaphysical study. Two quotes from opposite ends of Stockhausen's career illustrate this point. The first is from September of 2007, three months before his untimely death. Stockhausen wrote, "My life is extremely one-sided: what counts are the works as scores, recordings, films, and books. That is my spirit formed into music and a sonic universe of moments of my soul."[366] This quote served as the epigraph to the program of Stockhausen's memorial service in December of 2007. The second quote comes from fifty-two years prior, when Stockhausen was in the

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[365] Michael Kurtz, *Stockhausen: A Biography*, trans. Richard Toop (London: Faber and Faber, 1992), 76.

[366] Karlheinz Stockhausen, quote from September 25, 2007. Printed in his memorial service brochure, copyright the Stockhausen Foundation for Music, 2007.

beginning stages of his work as a composer of electronic serial music. He declared in an interview, "I want to invent new music, for I believe I have something new to say . . . . Today and in the future, as in the past, it will always be a matter of discovering what is beautiful, of drawing close to beauty, of writing beautiful music."[367] I use these two quotations to illustrate the leitmotif of Stockhausen's career: creating music that resonates as metaphysical.

Through both his teaching at the *Internationale Ferienkurse für neue Musik* (the International Summer Courses for New Music) at the Darmstadt Hochschule (or conservatory), and in his role in determining content for *Die Reihe*, Stockhausen maintained close ties to American postwar composers. Through those composers, including John Cage, David Tudor, La Monte Young, and Earle Brown, and through *Die Reihe*, Stockhausen's music theories became a source of study for many American artists in the 1960s. Musicologist Amy C. Beal begins her book *New Music, New Allies: American Experimental Music in West Germany from the Zero Hour to Reunification* with the statement, "During the second half of the twentieth century, American composer-performers and West German cultural institutions contributed to an unprecedented international exchange of musical, aesthetic, and ideological viewpoints."[368] This chapter looks in particular at Stockhausen's role in that exchange.

Stockhausen had several stays in the United States during the 1960s, but it was through the network of *Die Reihe* that his ideas on new music became manifest in visual arts circles. Published annually from 1955 to 1962 by Universal Edition, the famed

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[367] Kurtz, *Stockhausen: A Biography,* 60.
[368] Amy C. Beal, *New Music, New Allies: American Experimental Music in West Germany from the Zero Hour to Reunification* (Berkeley: University of California Press, 2006), 1.

Viennese distributor of modern music scores, each issue of *Die Reihe* was also translated into English and published by Theodore Presser, Co., in Bryn Mawr, Pennsylvania, usually two to three years after the original German volumes. Theodore Presser published the English editions between 1958 and 1968; see Appendix A for a full listing of the publication dates and essays of each edition. Although Filmmaker, violinist, and former member of Young's Theatre of Eternal Music Tony Conrad regularly read every issue as they came out in English.[369] Dean Fleming recalls reading *Die Reihe*, or at least discussing its content within the confines of the Park Place Gallery.[370] Conceptual artist Mel Bochner wrote two essays on serialism that included reference to Stockhausen's theories: "Serial Art, Systems, Solipsism," first published in *Arts Magazine* in the Summer 1967 issue, and "The Serial Attitude," published in *Artforum* in December of 1967. In "The Serial Attitude," Bochner describes how Stockhausen's use of serialism breaks up perception into a "directionless time-field," a concept he most likely gleaned from Stockhausen's ruminations on time in his *Die Reihe* essay " . . . how time passes . . . ," published in German in 1957 and translated to English by Cornelius Cardew for the 1959 reprint.[371]

American artist Dan Graham also recalled that he and Sol LeWitt read *Die Reihe* in the 1960s. Graham described it as "a theoretical magazine, where top composers actually sat down and wrote things" and that visual artists were interested in meeting composers and comparing the ways that they articulated ideas.[372] In an early 1980s

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[369] Tony Conrad, interview with the author, Austin, TX, September 2010.
[370] Dean Fleming, interview with the author, Austin, TX, April 2011.
[371] Mel Bochner, "The Serial Attitude," *Artforum* 6 (December 1967): 28.
[372] Dan Graham, "Dan Graham," interview by Eugenie Tsai, in *Robert Smithson: Drawings from the Estate*, ed. Friedrich Meschede (Munster, Germany:

interview, Andrea Miller-Keller asked LeWitt, "What other influences or experiences led you to embrace serialism as an effective tool?" In reply, LeWitt attributed his serialist leanings to a single source: Hans Rudolf Zeller's essay "Mallarmé and Serialist Thought," published in the English version of *Die Reihe* in 1964.[373]

This chapter seeks to contextualize American artistic interest in musical serialism through a study of Stockhausen's serial and electronic compositions of the 1950s and 1960s and an examination of the content of the eight issues of *Die Reihe*, which Richard Taruskin has argued was the "unofficial house organ" for the Summer Courses in Darmstadt.[374] After examining Stockhausen's position within the *Stunde Null* ("zero hour") politics of new music in postwar Germany and the Summer Courses at Darmstadt, I then discuss the ways that metaphysical content informed his composition and ideas for a spatialized sound. In the following study of *Die Reihe*, I argue that much of the content of *Die Reihe* attempts to synthesize a creative soulfulness with the overarching intellectual activity driving composers of post-war serial electronic music. Early electronic composers quickly realized that their music seemed to be driven almost purely by intellect and was generally not considered beautiful to most listeners; and therefore, composers needed to defend the creative act and humanity behind serialism. I will end with a discussion of LeWitt's use of serialism from *Die Reihe* and focus on the ways that his work from the 1960s have analogies in musical composition.

Landschaftsverband Westfalen-Lippe, 1990), 10.

[373] Andrea Miller-Keller and Sol LeWitt, excerpts from a correspondence, 1981 - 1983 to *Sol LeWitt: Critical Texts*, ed. Adachiara Zevi (Rome: Libri de AEIUO : Incontri Internazionali d'Arte, 1994), 117.

[374] Richard Taruskin, *Music in the Late Twentieth Century: The Oxford History of Western Music* (New York: Oxford University Press, 2009), 37.

Die Reihe had a mixed audience in the United States, reflecting mixed attitudes toward serial music. Its translation to English from 1958 to 1968 ensured that it had the most far-reaching readership among comparable periodicals, including the Swiss and Italian journals of electronic music *Gravesaner Blätter* and *Incontri musicali*.[375] In its English translation, *Die Reihe*'s original subtitle, *Information über serielle Musik*, was translated as *A periodical dedicated to developments in contemporary music*. Because its content reflected little of the American scene, American composers balked at the new subtitle, and dissident editors founded the American journal *Perspectives in New Music* in 1962 to ameliorate the problem. American music critics wrote several scathing reviews of the journal, targeting its extremely technical theoretical essays for their virtual incomprehensibility and use of jargon.[376] The task of this chapter's discussion of *Die Reihe*, then, is to glean what American artists—trained little, if at all, in theories of serial music—may have found useful of *Die Reihe* in the realm of the visual arts in the 1960s. It is my view that American artists like Bochner, Graham, and LeWitt approached their conceptual work with notions of "artistic research" and experimentation compatible with Stockhausen's emphasis on contained experimentation as part of the serial process.

The Darmstadt Scene

The development of a musical center at Darmstadt, a small town on the outskirts of Frankfurt in West Germany and close to Wiesbaden, which became a center of European Fluxus activity, reflected several musical needs and political maneuverings. In

[375] Morag Josephine Grant, *Serial Music, Serial Aesthetics: Compositional Theory in Postwar Europe* (Cambridge, UK: Cambridge University Press, 2001), 2.
[376] Grant, *Serial Music, Serial Aesthetics*, 2.

1946 Wolfgang Steinecke had initiated a program for radical musical composition at the new conservatory in Darmstadt. The town of Darmstadt had some political importance at this "zero hour" moment because of its location in the German state of Hessen, an American zone of occupation. With the assistance of composer Wolfgang Fortner, Steinecke obtained permission to start the *Ferienkurse* program through Everett Helm, an American composer who served as chief music officer of the American Military Government's Theater and Music Branch. Helm also secured the American Military Government's financial backing of the program.[377] Known as the International Summer Courses for New Music, the *Ferienkurse*'s highly selective program became a center for avant-garde musical activity in Germany and brought in young composers from around the world (Figure 3.1).

During the Second World War, the Nazis in Germany, the fascists in Italy, and the Communist regime in the U.S.S.R. dramatically shifted the focus of music in those areas, banning twelve-tone composition and atonal music in favor of a tonal neoclassicism (or neo-Romanticism) through nationalistic songs. In Germany, a chasm had formed between the classifications of *ernste Musik* (serious music, often called "E-Musik") and *Unterhaltungsmusik* (entertainment music, or "U-Musik").[378] The Nazis had done everything possible to silence E-Musik as "degenerate," although as Beal points out, West German commitment to the re-establishment of new music after the war did not mean that musical production had ceased entirely during the Third Reich. It just became much more difficult to obtain music books and scores or have any kind of a public life as

[377] Taruskin, *Music in the Late Twentieth Century*, 20.
[378] *Ibid.*, 15.

an avant-garde composer.[379] As their primary purpose, then, the composers at the Summer Courses sought to bring in young composers, mostly from the fascist-occupied areas of France, Germany, Austria, and Italy, to bring them up to date on concepts of modern atonal music.[380] Richard Taruskin and others have argued, however, that the American financial backing of the Summer Courses ensured an American presence; further, they "[propagated] American political and cultural values as part of the general Allied effort to reeducate the German population in preparation for the establishment of democratic institutions . . . . "[381] The "American" presence in the context of the Summer Courses meant regular guest lectures of American-born composers and musicians (including Earle Brown, a subject of the next chapter), the study of American music by composers such as Charles Ives and Aaron Copland, as well as a return to Germany of expatriates such as Paul Hindemith.[382]

The Summer Courses initially focused on the study of Schönberg's twelve-tone serial method, partially due to the older generation of composers teaching. The Polish composer René Liebowitz, a former Webern student who had started teaching at the Summer Courses in 1948, had published *Schönberg et son école: L'état contemporaine du langage musical* (*Schönberg and His School: The Contemporary State of the Language of Music*) in 1946, the first treatise on the Viennese School in a language other than German and the first since the end of fascism. According to Taruskin, "Twelve-tone music became a symbol of resistance . . . and by extension, a symbol of creative

[379] Beal, *New Music, New Allies*, 11.
[380] Paul Griffiths, *Modern Music and After* (Oxford: Oxford University Press, 1995), 35.
[381] Taruskin, *Music in the Late Twentieth Century*, 21.
[382] *Ibid.*, 21.

freedom."[383] Other composers brought in to teach at the Summer Courses included Stockhausen's professor in Paris, Olivier Messiaen, in 1949, and Varèse in 1950. Adorno, who returned to Germany in 1949 after a long wartime absence, substitute taught a composition class at the 1951 *Ferienkurse,* a course that administrators had originally reserved for Schönberg himself, who was too ill to travel from Los Angeles. In 1949, Adorno had published his *Philosophie der neuen Musik* (*Philosophy of New Music*), a missive against tonal U-Musik in favor of the formal purity of serialism, the dominant form of E-Musik. Taruskin writes,

> Responding only to what Adorno called 'the inherent tendency of musical material,' rather than to any call from the wider world, twelve-tone music seemed to embody a perfect artistic 'autonomy'. . . . [Adorno] regarded Schoenberg's twelve-tone music as a sublimation of the composer's earlier Expressionism; that is why, despite its abstractness, it remained for Adorno the most humane of all contemporary musics.[384]

In tonal music, a composer cannot make large steps or leaps between pitches or chords because a listener must be able to feel the progression of the music and intuit the next step. Likewise, composers know which scales to use for different moods of music. Major scales are lively and upbeat, but minor scales are darker and somber. In other words, audiences of tonal music know what to expect. This is not the same for serial music. Adorno's and Liebowitz's promulgation of twelve-tone serialism ensured that it became by far the dominant mode of music making in Darmstadt. Adorno and Liebowitz, following the cues of the Viennese School, endorsed the notion of a singular path of modernity that manifested in the late 1940s with serial music. Paul Griffiths writes that " . . . there is an arrow in history. But it was up to the individual to seize that arrow and

[383] *Ibid.*, 16-17.
[384] *Ibid.*, 17.

run with it, or not."[385] Stockhausen, a first-time student at the Summer Courses in 1951, was among the younger generation of composers who ran with it.

"Schönberg is dead." Young French composer Pierre Boulez claimed this as both fact and title of his polemic manifesto of serialism, *Schönberg est mort*, written in 1952 just months after the elder composer's death. This declaration ended with Boulez's call-to-arms for his generation, in which he stated, "Since the Viennese discoveries, any musician who has not experienced—I do not say understood, but truly experienced—the necessity of the dodecaphonic language is USELESS. For his entire work brings him up short of the needs of his time."[386] Yet, what Boulez intended by his title was both literal and figurative; he meant that the time had come for composers to put down the teachings of Schönberg and instead embrace the work of Webern, who had died tragically in a friendly-fire shooting in 1945. To put the differences between Schönberg's and Webern's twelve-tone music in art historical terms, Schönberg's use of sound was to Webern's as Kandinsky's use of line was to Mondrian's. While Schönberg achieved dissonances through harmonic overtones, Webern's music had a much more over-arching "formal purity" in using pointillist textures achieved over time through single tones. Boulez, also a former student of Messiaen, joined Stockhausen and the Italians Luigi Nono and Bruno Maderna in taking over the Summer Courses and introducing Webernian serialism to the mix.[387] After ten years as administrator, Steinecke supported this changing of the guard at Darmstadt.[388]

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[385] Griffiths, *Modern Music and After*, 6.
[386] Taruskin, *Music in the Late Twentieth Century*, 19.
[387] Elliott Antokoletz, *Twentieth Century Music* (Englewood Cliffs, NJ: Prentice Hall, 1992), 369.
[388] Griffiths, *Modern Music and After*, 42.

Stockhausen's leadership, along with Darmstadt's cultural caché for American composers, ensured that the Summer Courses became something of a meeting plan for the European musical avant-garde, and in many ways, the city of Darmstadt became the seat of Cage's European activity. Cage, a former Schönberg student, and other composers of the New York School visited regularly and lectured after 1954.[389] Korean artist, composer, and pioneer of video art Nam June Paik, who had previously written a graduate thesis on Schönberg, attended the Summer Courses in 1957 and 1958, during which time he became closely aligned with the aesthetic theories of both Cage and Stockhausen.[390] In addition, musicians in Stockhausen's courses enjoyed the company of Fluxus artists such as Emmett Williams, Wolf Vostell, Joseph Beuys, and Benjamin Patterson in the Cologne atelier of the artist Mary Bauermeister, Stockhausen's partner from the early 1960s to mid-1970s, and the poets of the experimental Darmstadt Circle (Figure 1.8).

Under Stockhausen's administration, the final concerts of the Summer Courses had become an important annual event because the experimental nature of the works often caused controversy, in turn setting the bar for the next year's round of courses. Swiss composer Heinrich Strobel, Stockhausen's former teacher in Paris, had taken over directorship of the annual new music festival at Donaueschingen. Together, the final concerts of the Summer Courses and the October weekend of concerts at the Donaueschingen Festival became the extended Woodstock of Germany. The immediate

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[389] William Duckworth, *Talking Music: Conversations with John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers* (New York: Schirmer Books, 1995), 232.
[390] John G. Hanhardt, *The Worlds of Nam June Paik* (New York: Guggenheim Museum Publications, 2000), 20-21.

postwar years also witnessed the rise of state-supported radio stations in Germany, which helped publicize concerts of new music. Following the lead of Parisian studios at the *Radiodiffusion-Télévision-Française* (RTF), the site of Pierre Schaeffer's initial experiments with French tape music (*musique concrète*) in 1948, the German radio stations also developed electronic music studios for artistic experimentation. Strobel had become the head of the *Südwestfunk* (SWF) in Baden-Baden, and his former student Boulez became the conductor of the SWF orchestra in 1958, returning to Darmstadt in the summer.

Likewise, Stockhausen found financial support in the *Westdeutscher Rundfunk* (WDR) in Cologne after 1953, allowing him to return to his hometown of Cologne during the academic year. 1956, the year Stockhausen took over administration of the Summer Courses from Steinecke, also marked the first year that David Tudor and Stefan Wolpe, a German expatriate teaching at Black Mountain College in North Carolina, lectured at the Summer Courses. Eight German radio stations broadcast parts of their 1956 final concerts, along with Radio Tel Aviv, Rundfunk Stockholm, and Radio Ljubljana, allowing for a new level of exposure to American musical activity across Europe.[391] According to Griffiths, " . . . The leading composers of the Boulez-Stockhausen generation in Western Europe were all supported by broadcasting organizations, either directly as employees (usually in electronic music studios) or indirectly through the provision of the means for performance and recording. Their sole responsibility,

[391] Beal, *New Music, New Allies*, 81.

therefore, was to create."[392] With the flexibility afforded him through the WDR center for electronic music, Stockhausen did indeed create.

Stockhausen, Mysticism, and Cosmic Music

Stockhausen came from a family of farmers in the countryside outside of Cologne. Both of his parents, despite their working-class origins, had musical sensibilities that they passed along to Stockhausen. His father had played the violin and the piano, but only the thirty-six black keys of the accidental sharps and flats of the keyboard, and his mother had played the piano. Though he worked in the fields even as a small child, Stockhausen learned piano at a young age and impressed people by listening to a song on a radio and playing it back with total recall and all of the correct harmonies intact.[393] He grew up a devout Catholic, perhaps with more religious vigor than most because of his mother's commitment to a psychiatric institution in 1932, leaving three young children in the care of their father. As a child during the rise of the National Socialist party in Germany, Stockhausen experienced deep trauma throughout his early years. His father's leftist leanings often landed him in trouble with the local Gestapo; he was shot in battle just before the end of the war in 1945. One of the Stockhausen run-ins with the Gestapo occurred after ten-year-old Karlheinz had written and recited a religious poem on the occasion of a bishop's visit to their town. The poem ended with the lines, "Though the storms of unbelief and destruction rage still more strongly than they do now,

[392] Griffiths, *Modern Music and After*, 42.
[393] Karlheinz Stockhausen, *Stockhausen on Music: Lectures and Interviews*, ed. Robin Maconie (London: Marion Boyars, 1989), 16-17.

/ yet we will hold up our faith."[394] Attributing the younger Stockhausen's public recitation of themes of "storms of unbelief and destruction" to the politics of the senior Stockhausen, the Gestapo detained him for several days.

The state also executed Stockhausen's mother, still a patient at the sanitarium, in the early years of the war. She lost her life because, as the Nazis told the Stockhausen family, the hospital patients used up too many food resources.[395] Stockhausen himself was called to military service in 1944. Because he had learned English as a student at the state boarding school in his region, Stockhausen was sent to a war hospital right behind the front line near Berlin. There, he tended to injured English and American soldiers who asked Stockhausen to play songs for them on the old piano at the hospital. He stated of those memories, " . . . I also made the interesting discovery that I could play music in all styles . . . . When everything else was gone, music seemed to be of value . . . . I would play for hours, to suit all tastes. One would ask for a Beethoven sonata and another for a very vulgar song, or a sentimental ballad."[396] This versatility not only served Stockhausen well during his year in the army, but also solidified his plans to study music further if he lived past the war.

Stockhausen attended the Hochschule in Cologne from 1947 to 1951, with an emphasis in piano. His earliest real composition, a piece called *Kreuzspiel* (*Crossplay*) from 1951, came out of his first summer at the *Ferienkurse*, where he met the Belgian composer Karel Goeyvaerts, and they studied Messiaen's serialism (Figure 3.2).

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[394] *Ibid.*, 18.
[395] *Ibid.*, 20-21. Stockhausen recalled that the Nazis offered the family his mother's cremated ashes, an affront to their Catholic beliefs since she had not received her last rites, but had listed her official cause of death, along with every other murdered patient at the hospital, as leukemia.
[396] *Ibid.*, 22-23.

Goeyvaerts introduced Stockhausen to the music of Webern, which he had not heard before, and to Messiaen's ideas of musical synthesis.[397] *Kreuzspiel*, a work for piano, a percussion trio, and two woodwinds, shows Stockhausen experimenting with Webernian serialism and single notes rather than chords; additionally, the "cross-play" of the title refers to the piano's rapid movements between high treble and low bass notes. Griffiths notes, though, that the title also comes from Stockhausen's Catholicism, a reference to the crucifix, and perhaps Stockhausen's own musical conversion to serialism as a type of religious conversion. Griffiths writes, " . . . [W]hat exhilarated Stockhausen as much as Goeyvaerts was the spiritual dimension of their work: the possibility of liberating, more than creating, sound structures that would have nothing human in their composition, that would be images of divine unity."[398] As Taruskin notes in relation to his early work, Stockhausen's experience of the war was nothing short of a religious conflict, particularly given his father's death in the final throes of the war. *Kreuzspiel* represents Stockhausen's religious rededication, although of a different sort after the zero hour.[399]

Sometime in the early 1950s, Stockhausen read German author Hermann Hesse's *Das Glasperlenspiel* (*The Glass Bead Game*), a novel informed by Hesse's study of Asian metaphysical philosophy, including Buddhism. Taruskin writes,

> Stockhausen identified strongly with Joseph Knecht, the protagonist of the novel, who like him was an orphan boy with musical gifts studying at the Cologne Musikhochschule (Conservatory), and who dedicates himself to the 'glass bead game' of the title, a quasi-monastic exercise that . . . . connected the callings of musician with "spiritual servant."[400]

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[397] *Ibid.*, 34.
[398] Griffiths, *Modern Music and After*, 38-40.
[399] Taruskin, *Music in the Late Twentieth Century*, 44.
[400] *Ibid.*, 44.

By this extension, the "play" or "game" of *Kreuzspiel* could refer to the Stockhausen's ideas of the spiritual unfolding of a work. Griffiths refers to Stockhausen's process as one of planning the scheme of a work, drawing it out, and letting it unfold sonically.[401] The idea of the game element may also relate to an anecdote from the time of *Kreuzspiel*'s creation. As noted earlier, in the summer of 1951, Adorno taught at the Summer Courses in place of Schönberg. Stockhausen and Goeyvaerts were performing Goeyvaerts's new piano sonata, written in a similar compositional process to the one just described. Confounded, Adorno stopped the music during the second movement, arguing that he couldn't see the point in this pointillist music because it was only in embryonic form. Stockhausen recalls, "So I stood there on the stage in short pants, looking like a schoolboy, and defended this piece because the Belgian [Goeyvaerts] couldn't speak German. I said, but Professor, you are looking for a chicken in an abstract painting."[402] Showing his tenacity, Stockhausen also reveals an early concept for his work: that each serial work becomes its own single totality.

Following on his early experiment with serialism in *Kreuzspiel*, Stockhausen composed what he termed "point music" of a Serial nature with works such as *Punkte,* of 1952, and his response to it, *Kontrapunkte*, a twelve-minute work that required the use of ten wind, string, and brass instruments. Instead of using the terms "tone" or "note," Stockhausen preferred to call his sonic material "sound atoms," perhaps owing to his own studies of the quantum physics of Heisenberg and to the acoustic theory of Hermann von Helmholtz and Joseph Fourier.[403] Stockhausen went to Paris from 1952 to 1953 to study

[401] Griffiths, *Modern Music and After*, 43.
[402] Stockhausen, *Stockhausen on Music*, 36.
[403] *Ibid.*, 37.

electronic music at the RTF, which used an old sine-wave generator located at the post office headquarters. Like many of the engineers in Paris, Stockhausen had acquainted himself with acoustic theory, and especially the theory of pure sinus tones, or tones that possess a sinusoidal waveform, in Helmholtz's 1863 book *On the Sensations of Tone*.[404] Stockhausen began the serious composition of electronic works in late 1952, such as *Konkrete Etüde*, a tape original under three minutes in length. Still working out frequency problems with the sine wave tones, Stockhausen used tape splices of prepared piano sounds for *Etüde*. The following year, Stockhausen returned to Cologne and began his appointment as a new collaborator for electronic music in the studio at the WDR, which also employed several engineers. At this point, he experimented with using the "pure tones" emitted from sine wave generators in his tape music.[405] Griffiths attributes this to Stockhausen's interest in "musical architectures" that required new sonic material in the form of sinus tones rather than the old sonic material of sounds produced by Western instruments.[406] Stockhausen, Herbert Eimert, and others at the WDR used the pure single tones emitted from sine wave generators as their sonic material. Using this wholly new sonic fabric that could be weaved from individual "sound atoms," the WDR composers fully believed that they were doing something revolutionary in the field of avant-garde music in making a kind of music diametrically opposed to traditional instrumental music. A visit to the WDR by Strobel, a visiting professor at the music school in Darmstadt,

[404] Griffiths, *Modern Music and After*, 52.
[405] Robin Maconie, *The Works of Karlheinz Stockhausen*, 2nd Edition (Oxford: Clarendon Press, 1990), 50.
[406] Griffiths, *Modern Music and After*, 52.

prompted reflection on the state of new music, when Strobel heard a sample of electronic music and urged Stockhausen to "write music, not mathematics."[407]

In 1954 Stockhausen attended a concert of Varèse's *Déserts* in Hamburg, where he operated the volume controls per Varèse's instructions (Figure 3.3). Varèse had used magnetic tape to create a portion of the landmark *Déserts* (1953-1954), which came out of his sketches for an earlier work called *Espace* and was written to accompany a never-completed Burgess Meredith film called *Le Désert*.[408] This piece, his first major composition in over twenty years, showed Varèse experimenting with the concept of synesthesia.[409] Significantly, the production of *Déserts* involved Varèse's use of multimedia since he employed theatre, film, and light projections during its performance. As he had done with *Espace*, the composer named *Déserts* to evoke the vast deserts in the western United States and the Gobi desert, as well as the solitary inner space of the human mind. Varèse has written that he intended to conjure images of "not only physical deserts of sand, sea, mountains and snow, outer space . . . but also this distant inner space which no telescope can reach, where man is alone in a world of mystery and essential solitude."[410] According to Stockhausen biographer Michael Kurtz, this performance was the impetus for Stockhausen's later work that included a "stereophonic combination of electronic music and orchestra."[411] As Cage had done in the late 1930s, Stockhausen began composing aleatorically in 1954. Like Cage, and eventually Young as well,

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[407] Kurtz, *Stockhausen: A Biography*, 46.
[408] Malcolm MacDonald, *Varèse: Astronomer in Sound* (London: Kahn and Averill, 2003), 321, 336-337.
[409] Olivia Mattis, "Edgard Varese and the Visual Arts" (Ph.D. diss., Stanford University, 1992), 188-189.
[410] MacDonald, *Varèse: Astronomer in Sound*, 337.
[411] Kurtz, *Stockhausen: A Biography,* 76.

Stockhausen became interested in "finding" sounds in the noise produced by everyday life.[412] Also like Cage, Stockhausen became interested in Asian music and Zen Buddhism, particularly from Messiaen's example of studying non-Western musical traditions of Africa and East Asia.[413] Messiaen's interest in Japanese culture and aesthetics encouraged Stockhausen's development of what he termed cosmic music, or music that relies on both the intuition of the performer and the idea that both audible and inaudible sounds fill the cosmos.

Stockhausen studied phonetics and information theory under Werner Meyer-Eppler at the University at Bonn at different points between 1954 and 1956. The study of phonetics, and differentiations between spoken and sung vowels and consonants, led Stockhausen to experiment with the human voice as sonic material. The effects, he believed, could only be achieved through electronic means of splicing vocal material. After several studies using tape recordings, sine waves, and white noise, Stockhausen created *Gesang der Jünglinge* (*Song of the Youths*), a thirteen-minute work on tape that was one of the earliest examples of spatial electronic music (Figure 3.4). This work showed Stockhausen incorporating "white noise" within other noise bands and then filtering them so that it seemed as though a single note surfaced.[414] *Gesang der Jünglinge* exhibited the static nature that Stockhausen had admired in the sine wave tones and that allowed him to attempt to strike a balance between chaos and structure in his electronic works. The work was also religious in nature: the song was a prayer sung by three young Jewish boys, Shadrach, Meshach, and Abednego, in the Old Testament story of

[412] *Ibid.,* 74.
[413] Griffiths, *Modern Music and After*, 16-17.
[414] Antokoletz, *Twentieth-Century Music*, 454.

Nebuchadnezzar's furnace in the book of Daniel, chapters one through three. Stockhausen wrote this work with the intention of projecting it throughout the Cologne Cathedral.[415] Through his splicing of the vocal and sine tone material, the song became unintelligible and scrambled as it changed speed and direction. Not surprisingly, this work identified Stockhausen as a pacesetter of the new generation of electronic composers and became one of his most-studied works.

In 1957 Stockhausen wrote *Gruppen* (*Groups*), a piece for three orchestras inspired by Cage's notion of theatre and Varèse's various uses of found sound, live orchestras, and electronic tapes.[416] Then, between 1959 and 1960, he composed *Kontakte* (*Contacts*), a work that could be played for four-channel tape with or without accompaniment by live piano and percussion. According to Richard Steinitz, *Kontakte* was a significant work in the development of spatial music because it involved the constant interaction between "object and onlooker," where the spatialization of the polyphonic sounds allowed for the sound's mobile structure.[417] *Kontakte* became the basis for *Originale* (*The Originals*, 1961), Stockhausen's first major foray into opera and the work with which he attempted to create live spatialized sound.

Originale, an event meant to take place over about an hour and a half, was composed in eighteen scenes in seven acts and relied on the performers to complete what Stockhausen called "instantaneous actions" that produced sound (Figure 3.5).[418] Stockhausen also layered the sound at the performances by including various recorded

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[415] Griffiths, *Modern Music and After*, 96.
[416] Kurtz, *Stockhausen: A Biography,*89.
[417] Richard Steinitz, "Preface: Master Musician and Mystic," in Karlheinz Stockhausen, *Towards a Cosmic Music: Texts by Karlheinz Stockhausen*, trans. Tim Nevill (Dorset, UK: Element Books, 1989), viii.
[418] Maconie, *The Works of Karlheinz Stockhausen*, 114-115.

versions of *Kontake*. The piece was performed twelve times in Cologne between October 26th and November 6th, 1961 alone, and many more times in New York in subsequent years, especially in 1963 and 1964. Actions performed spanned the artistic range of music, drama, film, photography, painting, recording music, street theatre, and street music.[419] Regular actors included Bauermeister, Paik, Tudor, cellist Charlotte Moorman, and experimental poet Hans Helms.

To spatialize sound to its fullest extent in live performance, Stockhausen intended for *Originale* to be performed on separate stages surrounding the audience. However, the management of most theatres generally denied these staging conditions because of the lack of audience seating that usually resulted. Stockhausen took a cue from Young, who had been a student at the Summer Courses in 1959, in dealing with the problem posed by live theatre in a concert setting. Young's 1960 composition *Poem for Chairs, Tables, Benches, Etc. or Other Sound Sources* found him extending the idea of creating unconventional sounds as a chance operation within a classical concert setting. Not only did Young use performers on the stage, but he placed them within the audience as well, creating a kind of surround sound. Stockhausen followed suit with *Originale* and placed performers around the concert halls, sometimes even in the rafters, to create the sense of all-over sound (Figures 3.6 and 3.7).

Despite his venture into musical theatre, Stockhausen became best known for his electronic music, which earned him much praise, but also some criticism. Due in large part to his dogmatic advocacy of serialism in composition at the Summer Courses, Stockhausen was attacked for what was seen as his musical elitism. Many among the

[419] *Ibid*., 115.

avant-garde in the United States viewed Stockhausen as promoting an old style of European music in the stubborn avoidance of new trends in American composition. In 1964 conceptual artist Henry Flynt and other members of the New York avant-garde, including filmmaker Jack Smith and violinist and filmmaker Conrad, distributed flyers denigrating Stockhausen's Eurocentric practices and picketed his concerts in New York, accusing the composer of musical racism for his open disregard for jazz (Figures 3.8 and 3.9).[420]

At the same time, Stockhausen gained popular attention due to his recent inspiration to arguably the most conspicuous musical group at the time: the Beatles. Seeking new musical sources that would propel him away from the lightness of "Love Me Do" era dance songs, Paul McCartney took up the serious study of Stockhausen's electronic music sometime after 1964. So enamored was McCartney of Stockhausen's recording techniques that the Beatles used a photo of Stockhausen on the cover of their seminal 1967 album, *Sgt. Pepper's Lonely Hearts Club Band*, the group's first effort at psychedelic music (Figures 3.10 and 3.11). In fact, the cacophonous bridge of the album's coda, "A Day in the Life," penned by McCartney and employing tape manipulations, can be seen as an homage to Stockhausen's pioneering work in electronic music. Later, in 1969, John Lennon proposed a joint concert meshing the music of the Beatles with that of Stockhausen, who later stated, "[Lennon] was particularly fond of my

[420] For a full account of Flynt's picketing of Stockhausen's New York concerts, see Benjamin Piekut, *Experimentalism Otherwise: The New York Avant-Garde and Its Limits* (Berkeley: University of California Press, 2011), 65 – 102.

Hymnen and *Gesang der Jünglinge*, and got many things from them, for example in 'Strawberry Fields Forever.'"[421]

In the mid-1960s, Stockhausen became more interested in spiritual music. Works such as 1965's *Hymnen*, a tape piece that combines over forty national anthems, showed him again balancing structure and chaos within his electronic pieces. As the composer has said of such works, " . . . I wanted to come closer to the realization of an old dream: to take a step further in the direction of composing not 'my' music, but a music of the whole world, of all countries and races."[422] Stockhausen took his first trip to Japan in 1966. This trip deepened his interest in making cosmic music because he gained new knowledge about Zen Buddhism, other forms of eastern mysticism, meditation, and Japanese *noh* and *kabuki* theatres. In addition, Stockhausen and Bauermeister visited D.T. Suzuki, whom they had studied for five years, and discussed how Zen Buddhism could enhance Stockhausen's thinking about using both natural and artificial sounds in his music.[423] Stockhausen remembered of his absorption of Zen spirituality and Asian culture that he became "more Japanese than the Japanese."[424]

While in Japan, Stockhausen composed in a Tokyo studio and created what he called "tele-music," which amalgamated several musical styles from around the globe. The resulting work, titled *Telemusik*, became what Stockhausen referred to as a "meta-collage" because the various elements of the different types of music informed one another at a higher level in the listener's mind.[425] Then, in 1966-1967, Stockhausen took

[421] Kurtz, *Stockhausen: A Biography*, 171.
[422] *Ibid*., 142.
[423] *Ibid*., 144.
[424] *Ibid*., 141.
[425] *Ibid*., 142.

a teaching position as a visiting professor of music at the University of California at Davis. He lived just outside of San Francisco and immersed himself in the study of Asian culture and philosophy that had flowered in the city. Pop musicians, such as members of the psychedelic band The Grateful Dead, attended public lectures given by Stockhausen; in turn, the composer also attended psychedelic concerts such as the sound and light extravaganzas of Jefferson Airplane at the Fillmore West.[426]

Most of Stockhausen's compositions from the latter half of the 1960s focus on his spiritual understanding of human experience in the cosmos. *Aus den sieben Tagen* (*From the Seven Days*), created after a seven-day fast that Stockhausen endured in 1968, focused on the composer's creating cosmic music through a collective intuition.[427] It represents one of Stockhausen's first forays into what he termed "intuitive music," a method of improvising akin to Young's event scores with the *Compositions 1960*. *Aus den sieben Tagen* consists of fifteen event scores or texts for intuitive (improvised) music. As a spiritual exercise, Stockhausen's fast resulted in this series of works in which he " . . . gave practically nothing to the performer . . . . Then and there I wrote fifteen texts. In 1969, we recorded twelve of them over eight days, two hours per day, without prior rehearsal . . . ."[428] In "giving nothing" to the performer, Stockhausen meant that he provided little musical direction. Instead, the texts read like Zen poetry. In the third section, *Verbindung* (*Connections*), the text reads,

> Play a vibration in the rhythm of your body
> (Of *your* body. The player's.)
> Play a vibration in the rhythm of your heart

[426] *Ibid*., 148.
[427] Karlheinz Stockhausen, *Towards a Cosmic Music: Texts by Karlheinz Stockhausen*, trans. Tim Nevill (Dorset, UK: Element Books, 1989), 5.
[428] Stockhausen, *Stockhausen on Music*, 114.

(That's possible.)
Play a vibration in the rhythm of your breathing
Play a vibration in the rhythm of your thinking
Play a vibration of your intuition
Play a vibration in the rhythm of your enlightenment
Play a vibration in the rhythm of the universe

Mix these vibrations freely
Leave enough silence between them[429]

The point of these open-ended cosmic instructions was to provoke an action and then reaction for every minute vibration enacted by each musician. What results is an indeterminate, and probably very quiet, meditation on performing with a group while trying to follow one's own intuition. Stockhausen realized how extreme these works seemed to his critics, in particular, the thirteenth section titled *Es* (*It*), a work for the entire ensemble. The score reads,

Think NOTHING
Wait until it is absolutely still within you
When you have attained this
begin to play

As soon as you start to think, stop
and try to re-attain
the state of NON-THINKING
Then continue playing
-and so on.[430]

By allowing for nearly infinite possibilities, *It* embraces one of the central tenets of even Stockhausen's most structured serial music: that no two performances will turn out the same, despite the initial scheme or the score. A similar, but not exactly equal, outcome is likely between two performances. Stockhausen notes that, without fail, every performance of *It* that he witnessed shared some of the same characteristics. They start

[429] *Ibid*., 117.
[430] *Ibid*., 120.

with short sound actions, become a longer sound where the musicians cut off one another, the sonic texture builds rapidly, all of the performers react instantly and intuitively, and then one musician stops and silences ensue.[431] The tension among musicians creates dense sonic structures similar in concept to his electronic compositions. Stockhausen came to believe that the legacy of his electronic music was that it had the possibility to free the imagination because, as he has explained, "the inner eye opens to visions of time and space which overstep what the laws of the physical world around us permit."[432] Some of these notions of time and space also became the material for Stockhausen's essays and editorial decisions in developing *Die Reihe*.

***Die Reihe*: The Row**

In 1955, serving as co-editors, Stockhausen and Eimert launched the small periodical *Die Reihe*. Translated as "the series" or "the row," referring to the tone row of twelve-tone or dodecaphonic music, *Die Reihe* originally served as a forum for composers to discuss new developments in serially composed and electronic music. Each issue related to a special theme determined by Eimert and Stockhausen. The editors then solicited essays from various contributors. Appendix A gives a full listing of the special topics, dates of publication, and essays in each of the eight volumes of the journal. In the interest of addressing material that may have interested visual artists in this section of the chapter, I have largely eliminated discussion of the most technical parts of *Die Reihe*'s essays, the majority of which would have made very little sense to anyone not trained in an electronic music lab. Indeed, the opacity of this technical writing garnered the bulk of

[431] *Ibid*., 121.
[432] Steinitz, "Preface: Master Musician and Mystic," viii.

the journal's harshest contemporary criticism. Instead, I focus more on the music cultures and continuities put forth and contextualized within each issue.

More often than not, *Die Reihe*'s contributors, the roster of which included composers such as Boulez, Cage, Goeyvaerts, Wolff, György Ligeti, and Henri Pousseur, took artistic license with the topics of their essays, rendering *Die Reihe* a useful document of the development of serial music in the late 1950s and early 1960s. Only Stockhausen and Eimert seemed to stick to the special themes, providing a backbone for this occasionally sprawling journal. Much of the content of *Die Reihe* attempts to synthesize a creative humanization of the new electronic music with the overarching intellectual activity driving composers of postwar serial music. As discussed earlier, electronic music attracted Stockhausen because, for him, it had the capacity to become more than human; it could progress into an entity more akin to the "divine unity" he sought in his serial work because it could combine the tones made by a machine with the intellectual and, in some cases, emotional choices of the composer. Due in large part to Strobel's directive to Stockhausen to "write music, not mathematics," Stockhausen and Eimert began to formulate a theory of electronic music based on its problems vis-à-vis instrumental music. First, electronic music is composed fully in a studio. Secondly, electronic music does not rely on instruments or musicians because it is broadcast via loudspeakers in performance. Because of this, composers had no need to score this music other than to document the methods by which they chose to derive sinus tones and put them together in a work. The consideration of the problems inherent to this new music led to a certain amount of anxiety about the audience's reception of the work. As a result,

several of the essays in the earliest issues of *Die Reihe* relate to the issues of perception and how they might be understood.

Stockhausen and Eimert dedicated the first issue of *Die Reihe*, published in 1955, to the theme of electronic music. In the first essay, titled "What is Electronic Music," Eimert defends electronic music by setting forth the basic history and tenets of its production. Concerning the clash between the intellectual endeavor of electronic music and the expressive capacity of instrumental music, Eimert writes,

> We know little of how emotion became involved in the practice of music making and even less of its intensity, which was observed for the first time in the 'musica reservata,' around 1550. . . . We must ask: has not music always been made by men? Even Pythagoras' music of the spheres was the work of human fantasy. Is electronic volume control anything else but the old dynamic?. . . . What is then the human element upon which our humanists are always harping? . . . pre-expressive music [of the 14th and 15th centuries] appears to [have] traits in common with electronic music; most significantly its distinctly material character. The material itself is made to 'speak'—not because it has found voice, but because it has been arranged by human device, even if with theological help. . . .[433]

Here, Eimert's invocation of the ancient Pythagorean notion of the "music of the spheres," the unheard and imagined sounds of the cosmos, as well as a point of meditation in early Vedic philosophy, taps into the mystical side of the Greek mathematician. For Eimert, expressiveness in music is subject to each listener, because, as a baseline, the human composer provides the agency for all sound to become expressive.

H.H. Stuckenschmidt's essay "The Third Stage: Some Observations on the Aesthetics of Electronic Music," also from the first issue of *Die Reihe*, furthers the study of perception. Stuckenschmidt describes the three stages of music, writing of the first

[433] Eimert, "What Is Electronic Music?," *Die Reihe* 1 (1955): 7.

stage as vocal and most limited, the second stage as instrumental and still predicated on the vocal stage—he uses the example that violin vibrato mimics the human voice—and the third stage as electronic, which "retains human participation in the compositional process, but excludes it from the means of realization."[434] Stuckenschmidt facilitates his argument by citing Heisenberg's *The Image of Nature in Contemporary Physics*, a major point of which Stuckenschmidt interprets by stating, "The natural scientist sees an image of Nature which is in reality an image of human relationship to it."[435] By extension, Stuckenschmidt writes that music is approached "from an associative viewpoint" of the listener, who will relate electronic music to other phenomena that sound like or suggest it.[436] The exact phenomena depend on the listener. Reflecting on the listener's mental ordering of sound in relation to a compositional metaphysics of music, he writes, "It is of the nature of music to give substance and definition to nothingness and chaos, it is also its nature to be in a state of continuous self-renewal. Its only certainty is in the unheard."[437] In composition, this self-renewal or repetition of forms leads to a newness of unifying structure, the process of which Stuckenschmidt compares to crystallization.[438]

The second issue of *Die Reihe* focuses on the life and legacy of Anton Webern, the hero of Darmstadt. Essays of "biographical contents" comprise the first half of the journal issue; "analytical contents," mostly contemporary uses of Webern's theories, fill the second half. As a counterpoint to Stuckenschmidt's more cosmic understanding of perception, Stockhausen's own "Structure and Experiential Time," attempts to theorize

[434] H.H. Stuckenschmidt, "The Third Stage: Some Observations on the Aesthetics of Electronic Music," *Die Reihe* 1 (1955): 13.
[435] *Ibid*., 12.
[436] *Ibid*., 12.
[437] *Ibid*., 11.
[438] *Ibid*., 11.

how time is experienced via musical formats. Stockhausen writes that repetition within a music structure serves to slow experiential time because of a lack of constant new aural information. On the other hand, unexpected events in music make time seem to pass more quickly as the listener attempts to organize all of the varying music material presented. According to Stockhausen, it is this constant element of surprise in music that creates an ostensible momentum of time.[439] Paradoxically, however, in a listener's losing a sense of time through this aural assault, she is actually experiencing time most strongly.[440] This argument might seem counterintuitive, considering that the time-based Minimalist compositions of the 1960s, and particularly those by Young and Riley, relied on sustained tones repeated over long periods of time with this same effect of losing one's sense of time. However, in the mid-1950s, this argument for constant surprise in music makes sense considering that Stockhausen's own work of this period is well known for its inconsistency. In fact, Dieter Schnebel, in the fourth volume of *Die Reihe*, which has the theme of Young Composers, writes of this very discontinuity in Stockhausen's work, stating that each electronic composition of the period is its own self-contained entity. The seeming discontinuity among these studio experiments, however, binds these works together in what Schnebel refers to in cosmic terms as the "all embracing unity" or "all penetrating light" of Stockhausen's musical ethos.[441]

On the topic of metaphysics in *Die Reihe*, an interesting contradiction emerges. Despite Stockhausen's personal and well-documented interest in metaphysical philosophy and the cosmic properties of sound, and despite a series of writings later

[439] Karlheinz Stockhausen, "Structure and Experiential Time," *Die Reihe* 2 (1958): 64.
[440] Stockhausen, "Structure and Experiential Time," 65.
[441] Dieter Schnebel, "Karlheinz Stockhausen," *Die Reihe* 4 (1960): 122, 126.

published under the title *Towards a Cosmic Music*, his writing in *Die Reihe* has very little overt metaphysical content. This contradiction likely stems from Stockhausen's role as co-editor of this journal, which always had as its basic premise the study of the technical nature of serial music. He reserved his most technical writing for *Die Reihe* and published other lectures on the cosmic capacities of music independently. Some of Stockhausen's essays, however, for example "Music in Space" from the fifth issue, use his scientific acoustical research in the service of a larger goal of cosmic music.

It will come as little surprise that Stockhausen's frequent colleague and collaborator, Cage, presented the most egregious infractions against the technical premise of *Die Reihe* in writing from a more metaphysical standpoint. By this point, Cage was well-known for composing aleatorically by using chance outcomes from consulting the *I-Ching*, the ancient Chinese book of divination, and for his use of silence as a Zen *koan* of emptiness or a void, presented most convincingly in his silent piece, *4'33."* The third issue of *Die Reihe*, first published in 1957, centers on the theme of "Musical Craftsmanship." Cage contributed an essay titled "To Describe the Process of Composition Used in 'Music for Piano 21-52'," quite notably NOT an electronic or a serial work. Here, Cage describes the process of using the *I-Ching* as a chance operation in his composition. In this piano piece, he started out with what he called his four "total systems," which consisted of four pages, each with two staves and fifteen additional ledger lines. He then used a chance operation within certain numerical parameters to determine how many sounds would go on each page. Cage then created a quick drawing of dots on unlined transparent paper, which he would then transpose to the staves. He flipped a coin eight times to determine whether each staff would have a bass or treble

clef. Cage next divided the sixty-four possibilities of the *I-Ching* into three groups of piano sounds: normal, muted, or plucked. To create this division, he rolled a six and a forty-four, which determined that tossing a one through a five would result in a normal sound; rolling a six through a forty-three would produce a muted sound, and a forty-four through a sixty-four would produce a plucked sound.[442] He then used the same system to establish whether a tone would be natural, sharp, or flat, making exceptions for B and E, which can be only natural or flat. Lastly, Cage attached a note to the pianist that he or she could use any rhythm, duration, and silences desired, making the performance of the work improvisational as well.[443]

This essay constitutes an early written example of chance operations within a compositional setting. Chance operations have their own metaphysical properties in that the composer relies on some sort of cosmic notion of uncertain fate to determine the outcome. Cage's ideas of chance, which paralleled but differed from artist Marcel Duchamp's use of "canned chance" in several of his readymades, became most prevalent two years later when students in his experimental music classes at the New School in New York conceived of the event score, a practice furthered by Young in 1960.[444] One of

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[442] John Cage, "To Describe the Process of Composition used in 'Music for Piano 21 – 52'," *Die Reihe* 3 (1959): 41.
[443] *Ibid.*, 47.
[444] Cage's concept of indeterminacy is very similar to Duchamp's idea of canned chance. For both of these concepts, the objects of chance have strict parameters, but the outcome of actions upon the objects cannot be known in advance. Cage's use of chance had a metaphysical leaning, whereas Duchamp's did not. For example, Duchamp used chance as a play with physics in his *Three Standard Stoppages*, where he dropped three strings of a meter length each from a meter above the ground. He then fixed the three strings in their new lengths. Of this operation, Duchamp stated, "If a thread one meter falls from a height of one meter straight on to a horizontal plane twisting *as it pleases* and creates a new image of the unit of length" (Marcel Duchamp, *The Essential Writings of Marcel Duchamp*, ed. Michel Sanouillet and Elmer Peterson (London: Thames and Hudson,

the most interesting aspects of this particular essay, however, is the note that Cage leaves for the performer, which shows the early seeds for his concept of indeterminacy, which he fully explored in his lecture from the 1959 issue of *Die Reihe*. In this commentary, Cage writes,

> A performance is characterized by the programmed time-length calculated beforehand and adhered to through the use of a stop-watch. This is primarily of use in relation to an entire page, secondarily of use in relation, say, to a system; for it is possible that, though the space of a page is here equal to time, the performance being realized by a human being rather than a machine, such space may be interpreted as moving, not only constantly, but faster or slower. Thus, finally, nothing has been determined by the notation as far as performance-time is concerned . . . . [445]

Here, Cage grapples with the issue of scoring and time. One keeps the time of the piece through a stopwatch rather than through a time signature. If the page of the score itself represents the time needed to complete the work, the "space" of that score "moves" at different tempi.

Stockhausen similarly tackled the issue of time in the third issue of *Die Reihe*, penning a reflection titled " . . . how time passes . . . ". In this essay, Stockhausen presents his idea of using of time-space as a metaphysical entity through a spatial organization of sound. " . . . how time passes . . . " represents a technical meditation on the new use of duration in electronic music. This imminent concern with time relates to the Darmstadt composers' interest in formal purity of sound, an idea coming from Webern, and creating sequences of sonic tone clusters that interact indeterminately in performance. Stockhausen conceived of his music existing both in time and in space. He

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1975), 33). As another example of canned chance, the score for Duchamp's *Erratum Musical* consists of torn up musical notes chosen without any order by Duchamp's two sisters (Duchamp, *The Essential Writings of Marcel Duchamp*, 34).

[445] Cage, "To Describe the Process of Composition," 43.

writes, " . . . an entire piece can be imagined as the *one* time-spectrum [emphasis in the original text] of a single fundamental duration . . . . "[446] Stockhausen's *Gesang der Jünglinge,* the thirteen-minute work on tape that incorporated three different vocals, was one of the earliest examples of spatial electronic music. Over loudspeakers in multiple channels, the tones of this work interacted by either harmonizing or colliding in the performance space, vibrating and creating what one might call sonic sculptures. In a work from 1956, an electronic piece called *Zeitmasse*, which translates to "time blocks," Stockhausen similarly created tonic structures existing in space, reflecting his understanding of a block-shaped universe. In this universe, time exists not on a continuum, but as discrete cells.

Eimert and Pousseur also contributed essays to the third issue of *Die Reihe*. Eimert's "The Composer's Freedom of Choice" reflects his constant consideration of sound material, especially for electronic music composers. He writes, "'Where notes exist, there can be music.' But can there? Do notes exist? Or do they first have to be made? Doubtless both can be true."[447] Here, Eimert presents something of a metaphysical riddle or Zen *koan*, a "chicken or egg" situation not unlike Stockhausen's admonition to Adorno that his dissatisfaction with Goeyvaerts's sonic sketch was "looking for a chicken in an abstract painting." Does sound exist on its own or must it be made by something? Likewise, can a composer ever fully consider a composition finished if it exists forward in time through performance? In other words, does every concert breathe "newness" into

[446] Karlheinz Stockhausen, " … how time passes … ," *Die Reihe* 3 (1959): 26.
[447] Herbert Eimert, "The Composer's Freedom of Choice," *Die Reihe* 3 (1959): 5.

an "old" score, whether a single minute or five hundred years old, by continuing its discourse into the future indefinitely?[448]

Pousseur's essay from the third volume, "Outline of a Method," while primarily dedicated to his compositional process, also considers performance and the audience's perception of sound. Early on, he offers something of a reception theory akin to Gestalt psychology. He states, "Our sensibility, our concrete consciousness of the world, is innervated by laws which serve as organizing forces, ensuring 'rightness,' the unconditional and immediate coincidence of our sensibilities and the objects they perceive."[449] He further states that musical experience is like Gestalt theory in that any human's conception of music is predetermined by the music that one has already heard. In this way, for atonal music, the unpredictability must always be checked against what listener's might understand as predictable.[450] This offers a paradox, in that expecting unpredictability becomes a predictable event. Later in the essay, Pousseur references Paul Klee's sketches for his "colored chess-boards" as serial efforts trying to work out the conceptual scheme (Figure 3.12). Pousseur writes of Klee's technique,

> The colours for the various squares are given numbers. Perhaps one will see here a useless cerebral game, unrelated to the perceived result, to the wholly concrete and immanent meaning of the picture . . . . Are not results—such as the wonderful

[448] Consider, for example, sound artist Janet Cardiff's *Forty Part Motet*, an installation at the Metropolitan Museum of Art's The Cloisters in 2013. In this work, Cardiff broadcast an eleven-minute interpretation of Thomas Tallis's *Spem in alium numquam habui*, a motet from the mid-sixteenth century, over forty loudspeakers in one of the chapels at The Cloisters. Though the score for *Spem in alium* comes from one moment in time, performances of the work, including Cardiff's, give it a lifespan likely far beyond anything Tallis's imagination could have conjured. See http://www.metmuseum.org/exhibitions/listings/2013/janet-cardiff.
[449] Henri Pousseur, "Outline of a Method," *Die Reihe* 3 (1959): 44-45.
[450] Pousseur, "Outline of a Method," 45-47.

> pictorial discoveries of Klee—the most convincing justification of this procedure?[451]

In this way, Pousseur places some primacy on the musical results of his work. Stockhausen, by contrast, considered himself more of a researcher or experimentalist in focusing on the process of his works as a single entity (or Gestalt), giving equal importance to the performance of his work and the originating idea.[452]

The fourth volume of *Die Reihe*, first published in 1958, centers on the theme of "Young Composers." Since Stockhausen and Eimert produced this issue during 1957, the first full year of Summer Course leadership under the younger generation of composers, it may be viewed as a primer of the latest musical activity in Europe. For each essay, one emerging composer wrote about the works of another. Wolf-Eberhard Von Lewinski, in his introduction to the journal discussed the issues at hand for emerging serial composers. Von Lewinski addresses the historical arrow of modern music, stating that young composers cannot ignore Debussy's chromaticism or Webern's distillation of sonic matter "to the very thresholds of perception."[453] Looking to the modes of development of young composers, Von Lewinski embraces Adorno's notion of the trajectory of the avant-garde through the lens of none other than Heisenberg, writing, "This is not done by looking back; in Heisenberg's words, 'Man's intellectual development has many dimensions, not only the one in which he has been developing for the last few centuries.'"[454] To continue the arrow metaphor, then, there might be one body, but multiple feathers, or "dimensions" of inquiry. Further, in defending the work of new

[451] Pousseur, "Outline of a Method," 68-69.
[452] Griffiths, *Modern Music and After*, 43.
[453] Wolf-Eberhard Von Lewinski, "Young Composers," *Die Reihe* 4 (1960): 2.
[454] Von Lewinski, "Young Composers," 4.

composers such as Stockhausen, many of whom viewed each work as its own entity outside of a continuum of a larger drive toward style, Von Lewinski invokes the words of another physicist, Einstein. He states, "I recall . . . the words of Albert Einstein, that can be applied positively in [the case of young composers] and negatively to many musicians of the first half of the century: 'Originality is lack of style'."[455] For American conceptual artists such as Mel Bochner and Sol LeWitt, these concepts of originality and style may have resonated as similar to currents in the art world.

The fifth volume of *Die Reihe*, originally published in 1959, is titled "Reports and Analyses" and seems to focus on analysis of method for the contemporary serial composer. Heinz-Klaus Metzger's "Abortive Concepts in the Theory and Criticism of Music" tackles issues of language and terminology in new music (itself a loaded term since all music is briefly "new"). He argues for a reconsideration of semantic terms such as "atonal" (one that Schönberg himself despised), "serial," "pointillist / point music," and "vital," instead proffering the terms "aconstructive" and "elemental" for the newest serial techniques. He disseminates usage of the term "experimental," stating that truly experimental music, like Cage's *Water Walk* (1959), has a much more scientific feel as research toward an indeterminate or unknown end (Figure 3.13).[456] Continuing this notion of the scientific research of sound, Gottfried Michael Koenig's essay "Studium im Studio" talks about studio practices in electronic music laboratories, noting the different

[455] Von Lewinski, "Young Composers," 4.
[456] Heinz-Klaus Metzger, "Abortive Concepts in the Theory and Criticism of Music," *Die Reihe* 5 (1961): 27.

kinds of equipment and working processes that one would find in these experimental labs.[457]

Stockhausen contributed two essays to the fifth volume of *Die Reihe*. His "Electronic and Instrumental Music" recapitulates some of his earlier ideas on electronic versus instrumental (instrument-made) music from the first issue of the journal. His second essay from 1959, titled "Music in Space," embarks on a theory of his new terrain of sonic sculpture. Stockhausen describes the impetus for music written for space. He felt that, within traditional Western instrumental music, the four dimensions of music were limited to pitch, duration, timbre, and loudness. Early spatial music experiments came mostly from church music of the sixteenth and seventeenth centuries, when composers such as Ockegham composed music for two or more choirs to sing simultaneously, achieving a "poly-choric" effect. Mozart had also written two spatial works, his *Serenata nottura* for two orchestras and a second nocturne for four orchestras.[458] With electronic music, Stockhausen believed that the composer could tap into a fifth dimension of location or topography in order to feel music in space. To do so, Stockhausen advocated a spherical musical hall with loudspeakers around the perimeter that broadcast tones spatially toward the center. At different points in the round hall, audience members would experience the spatial music differently, but without the composition's favoring any single characteristic of the music.[459]

Stockhausen realized this dream of a round hall with multiple speakers in his sonic fête at the World's Fair in Osaka, Japan, in 1970. The West German Pavilion

[457] Gottfried Michael Koenig, "Studium im Studio," *Die Reihe* 5 (1961): 30-39.
[458] Karlheinz Stockhausen, "Music in Space," *Die Reihe* 5 (1961): 67-68.
[459] Stockhausen, "Music in Space," 69.

featured a spherical auditorium in which viewers enjoyed light displays and over five hours of Stockhausen's music each day for six months (Figure 3.14). With the meditational cosmic music, played in concerts lasting over five hours at Osaka, Stockhausen aimed to alter the audience's perception of space over a significant period of time. Steinitz explained of the experience at Stockhausen's music at Osaka, "Immersed in the fluidity of multi-directional sound, the listener is effectively transported outside any localized context of space or time."[460]

Also playing with the confines of space and time, Cage first published his seminal essay "Indeterminacy" (simply titled "Lecture" for *Die Reihe*) in the fifth issue of the journal. Cage's lecture on indeterminacy is a time-based work, and again, is neither a serial nor an electronic piece. It consists of thirty short texts, each of which should be read aloud over the course of one minute. The lecture spans thirty full pages of the journal, because most of the essays were typeset in inconsistent spatial arrangements, with lines falling into multiple rows and columns, recalling, for example, the non-standard organizations of e.e. cummings' and Mallarmé's poetry. Each page, then, represents a single minute of the lecture, no matter the length of the text. Notably, both the 1959 and 1961 versions contain both the German and English versions of the texts. The individual texts may be read in any order, creating an indeterminate outcome based on the method of improvisation used by the performer. By this, Cage meant that, even though the text and timing were pre-set, the order and dynamic of the performance was left to the discretion of the performer, creating an indeterminate performative situation. In this setting, chance again becomes a metaphysical action.

[460] Steinitz, "Preface: Master Musician and Mystic," viii.

A deeper level of Cage's metaphysical leanings comes through the subject matter of the individual texts of "Indeterminacy." Many of them are anecdotes personal to Cage, some are jokes, and some are Zen meditations. For example, Cage writes, "When I told David Tudor that this talk on indeterminacy was nothing but a series of stories, he said, 'Don't fail to put in some benedictions . . . Blessings . . . like they say in the Sutras: 'This is not idle talk, but the highest of truths.'"[461] What makes these statements most interesting is that they all seem to end without resolution, creating an open-ended space for meditation. In traditional tonal music, composers create phrases based on a question and answer system of antecedents and consequents. The antecedent opens the musical phrase with a question and the consequent logically closes the phrase with resolution. Cage's "Indeterminacy" thus presents a series of antecedents that leave room for the spiritual resolution by the audience in indeterminate endings.

The theme of the sixth volume of *Die Reihe*, "Music and Speech," reflects Stockhausen's nascent interest in the theories of phonetics of Meyer-Eppler in Bonn. This issue begins with the essay that Sol LeWitt recalls reading most carefully, Hans-Rudolf Zeller's "Mallarmé and Serialist Thought." Zeller writes of Boulez's championing of the late-nineteenth century poetry of Stéphane Mallarmé as a precursor to musical serialism in the early twentieth century. Zeller discusses the "concreteness" and formal qualities of Mallarmé's poetry, in which he constructs poems out of words and their "meta-language" rather than ideas. In this way, Zeller ties Mallarmé to Webern's tradition of formal purity of tone, except that in the poet's case, the discrete word has the equivalent of a

[461] John Cage, "Lecture [Indeterminacy]," *Die Reihe* 5 (1961): 117.

Webernian tone.[462] In works such as *Un coup de dés* (*A Roll of the Dice*) and the three-dimensional architecture of his text *Livre* (*The Book*), an epic project that Mallarmé worked on for over thirty years, the poet developed his notion of "the block." Zeller describes the block as a " . . . three-dimensional spatial structure . . . [that] is only the *visual* model for a non-visual, multi-dimensional, poetic space which would be accessible only to the poet in a sort of vision."[463] *Livre*, much like Cage's later "Indeterminacy," could theoretically shift in order, taking on different appearances at different times, like hypertext. What is more, only someone with a higher state of consciousness would have the ability to access Mallarmé's block; in this way, Mallarme's use of language conflates with a metaphysical vision of a non-visual dimension.[464] As Stockhausen later did in *Kreuzspiel*, Mallarmé devised the vision of *Livre* as a type of game.

The seventh issue of *Die Reihe*, initially published in 1960, covered the theme of "Form-Space," a topic close to Stockhausen's own work with spatial sound and creating sonic sculpture with invisible sound atoms. In her essay "Amancio Williams' Space Theatre," Ursula Burghardt-Kagel, the only woman writing for *Die Reihe*, discusses the proposed "space theatre" of the Argentine architect Williams in the 1940s. Hoping to achieve an equal level of loudness for every individual in an audience, Williams conceived of an "auditorium for plastic theatre and sound in space" that would compensate for different seating levels (Figure 3.15). Like Le Corbusier's and Xenakis's Philips Pavilion, the space of the auditorium shunts sound appropriately, in this case, for an equal level of sound for optimal homogeneity of experience. Sloping surfaces and

[462] Hans Rudolf Zeller, "Mallarmé and Serialist Thought" *Die Reihe* 6 (1964): 6-11.
[463] *Ibid*., 15.
[464] *Ibid*., 15.

platforms direct sound waves to the 4,000 seats in sixteen concentric rows.[465] Like Stockhausen's pavilion at Osaka, Williams used a sonic architecture to achieve the kind of acoustic results not possible in conventional concert halls.

Also in the seventh issue, filmmaker John Whitney presented an essay titled "Moving Pictures and Electronic Music." Whitney, a pioneer of abstract film, had learned of twelve-tone music from Liebowitz in Paris in 1939. Whitney describes his (and his brother James's) design for an apparatus for abstract film music: a type of machine that used sine wave generators in conjunction with a variety of pendulums. The filmmakers intended to use the musical results for soundtracks of their abstract films, which Whitney described as "abstract graphic compositions that, like music, existed in a time structure."[466] Viewing the filmstrips as serial permutations, the Whitneys intended for their electronic music apparatus to compose serial sound structures (Figure 3.16).

Die Reihe's eighth and final issue, called "Retrospective," shows Stockhausen's embracing of information theory after 1962. Eimert penned an essay that provides a biographical sketch of Werner Meyer-Eppler, a pioneer of information theory. As a response of sorts, Meyer-Eppler contributed his own essay, "Musical Communication as a Problem of Information Theory," in which the author outlines a scientific definition of music using information theory. He writes of the relationships among composer, musician, and listener and then speaks to the reception of various signals (acoustic and linguistic) that occur in that relationship.[467] Using a mathematical model, Meyer-Eppler

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[465] Ursula Burghardt-Kagel, "Amancio Williams' Space Theatre," *Die Reihe* 7 (1965): 20 - 21.
[466] John Whitney, Moving Pictures and Electronic Music," *Die Reihe* 7 (1965): 62.
[467] Werner Meyer-Eppler, "Musical Communication as a Problem of Information Theory," *Die Reihe* 8 (1968): 7.

theorizes that two kinds of music exist: that of the composer and that of the listener. The musician acts as a transferring agent between the composer and the listener in two separate exchanges.[468] The remainder of the final issue of *Die Reihe*, so dense with technical ideas and renderings, may signal why this was the last issue of the journal. Universal Edition, a major European publisher of scores, could likely no longer sustain a journal with such a small and specific readership. With the final issue, Stockhausen and Eimert rendered *Die Reihe* almost completely esoteric. Ultimately, *Die Reihe* remains an important document of its moment, not for its collective wisdom, but for the disparate individual contributions made to the study of serial and electronic music.

LeWitt as Composer

The American sculptor Sol LeWitt was one of the artists who responded most actively to the serial ideas and techniques from *Die Reihe*. As mentioned in the introduction to this chapter, LeWitt was a reader on *Die Reihe* and had listed Zeller's 1964 essay, "Mallarmé and Serialist Thought," as one of his chief sources on serialism.[469] LeWitt's friend, the sculptor Carl Andre, acknowledged the musicality of LeWitt's sculpture in a concrete poem, writing, "WHEN YOU GO TO SEE SOL YOU SEE MUSIC / WHEN YOU GO TO SEE SOL YOU SEE MUSIC / TO SOL WHO KNOWS

[468] Meyer-Eppler, "Musical Communication as a Problem of Information Theory," 10.
[469] Bernice Rose notes that LeWitt was especially impressed by Zeller's description of Mallarmé's *Livre*, a "book project . . . in which a book like a cube, as high as it was wide, was to be placed in the middle of a room. The top page would be read aloud by one person and placed aside to then be read y another person and so on." Bernice Rose, "Sol LeWitt and Drawing," in *Sol LeWitt*, ed. Alicia Legg (New York: Museum of Modern Art, 1978), 34.

THAT ALL ART ASPIRES TO THE CONDITION OF MUSIC."[470] Here, Andre echoes the sentiment of Renaissance art historian Walter Pater, who wrote in his 1893 in a chapter on Giorgione in his book *The Renaissance: Studies in Art and Poetry*, "All art constantly aspires to the condition of music. For while in all other works of art it is possible to distinguish the matter from the form, and the understanding can always make this distinction, yet it is the constant effort of art to obliterate it."[471] But Andre repeats the more critical idea: that a viewer ("YOU") sees music in LeWitt. A double meaning emerges. Presumably, Andre meant that one thinks of music when looking at LeWitt's work, but the ambiguity of the phrase "TO SEE SOL" also suggests that one might "see" music in LeWitt himself, rather than in his art. In this section, I compare LeWitt's compositional practices to those of Stockhausen, using ideas from *Die Reihe*, in arguing for LeWitt as a multidisciplinary artist.

Mette Gieskes, in her dissertation "The Politics of System in the Art of Carl Andre, Sol LeWitt, and Vito Acconci, 1959-1975," has written most extensively and convincingly about LeWitt's use of serial music as a source for his sculpture and wall drawings.[472] Works such as his *Serial Project 1: ABCD* (1966) demonstrate, as Gieskes argues, LeWitt's internalization of the principles of seriality, where the ordered system at play must be worked out in advance by the artist and reconfigured by each subsequent

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[470] Carl Andre, *Cuts: Texts, 1959-2004*, ed. James Meyer (Cambridge, MA: MIT Press, 2004), 130.
[471] Walter Pater, *The Renaissance: Studies in Art and Poetry*, dover ed. (London and New York: MacMillan and Company, 1893; Mineola, NY: Dover Publications, 2005), 90.
[472] Mette Gieskes, "The Politics of System in the Art of Carl Andre, Sol LeWitt, and Vito Acconci, 1959-1975" (Ph.D. diss., University of Texas at Austin, 2006), 98-191. Gieskes includes a lengthy discussion of Mallarmé and LeWitt. Pamela Lee has written about LeWitt's interactions with composers Steve Reich and Philip Glass. See Pamela M. Lee, "Phase Piece," in *Sol LeWitt: Incomplete Open Cubes*, ed. Nicholas Baume (Cambridge, MA: MIT Press, 2001), 49-58.

viewer (Figure 3.17). In LeWitt's wall drawings, such as *Wall Drawing #11* (1969), he acts as a composer. The directions for this work, written below it, act as the event score (Figure 3.18). The drawing, then, much like Marian Zazeela's drawing for Young's *Composition 1960 #13 to Richard Huelsenbeck*, becomes the musical realization of the written score.

LeWitt (1928-2007) was a music collector. He documented parts of his record and cassette collection in his 1980 photo book *Autobiography*, in which he photographed details of objects in his home and arranged them in 3x3 grids on each book page (Figure 3.19).[473] LeWitt owned vinyl records, cassette tapes that he dubbed himself, and extensive journal lists of his cassette collection, meaning that he kept records of his sound recordings on both vinyl and cassette. Despite his fastidious collection and record-keeping, he did not have formal musical training. LeWitt was born in Hartford, Connecticut, and earned a B.F.A. from Syracuse University. After serving in the United States Army from 1951-1952 in Japan and Korea, where he admired a great number of shrines, temples, and gardens, LeWitt moved to New York to study at the Cartoonists and Illustrators School, now known as The School of Visual Arts.[474]

Some of LeWitt's earliest three-dimensional works, such as *Run IV* (1962) used words and painted figures enclosed within squares (Figure 3.20). LeWitt stated of these works, "The figures were taken from single frames of Muybridge's serial

[473] Sol LeWitt, *Autobiography* (New York and Boston: Multiples, Inc. and Lois and Michael K. Torf, 1980), n.p. Some pages of *Autobiography* are arranged in 2x3 grids. I thank Joseph Newland of The Menil Collection, Houston, for sharing his experience of the LeWitt home in Chester, Connecticut, where he witnessed the intact music room where LeWitt spent much of his free time, according to Carol LeWitt.
[474] Alicia Legg, ed., *Sol LeWitt* (New York: Museum of Modern Art, 1978), 12.

photographs. . . . These pieces are referred to as structures because they are neither paintings, nor sculptures, but both."[475] According to Gieskes, LeWitt borrowed the sequential structure of these works from Eadweard Muybridge, whose 1887 *Animal Locomotion* showed progressive images of motion. She asserts that he did so "in part because the individual pictures were never shown separately, but always in series. In LeWitt's eyes their meaning lay not so much in the images as autonomous entities as in the relationship between them."[476] Working with the square and cube format, LeWitt began making his open and closed floor structures based on the cube form (Figure 3.21) and modular structures in serial form in 1965 (Figure 3.22), the year before he exhibited at the Park Place Gallery with Valledor and Robert Smithson. After writing his "Paragraphs on Conceptual Art" for *Artforum* in 1967, LeWitt made his first wall drawing at the Paula Cooper Gallery in New York in 1968, using his premise of four kinds of lines: horizontal, vertical, and two diagonals.[477]

In the April 1967 issue of *Artforum*, Lucy Lippard argued in her essay "Sol LeWitt: Non-Visual Structures" that enclosure and the paradoxical relationship between the visual and the conceptual had become LeWitt's foremost concerns in making sculpture. LeWitt's 1967 series, the "ABCD" floor structures with open and closed geometric forms, leave themselves open for the viewer to deduce the geometric concept the artist used. They do not conform to the visual logic or symmetry that one might expect from such a geometric structure, and, therefore, the conceptual nature of the work becomes clearer because they seem so irregular. Lippard notes, "The project is read

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[475] *Ibid.*, 50.
[476] Gieskes, "The Politics of System in the Art of Carl Andre, Sol LeWitt, and Vito Acconci, 1959-1975," 120.
[477] Legg, *Sol LeWitt*, 12.

sequentially like musical notations rather than statically like architectural models."[478] According to Lippard, an ambiguity comes about through the paradox of concept versus perception.[479] The concept is pure; the execution of the work leaves it open to the "impurity" of perception.

Lippard's concept of reading the works as a musical sequence parallels the notions of reading Poons's and Valledor's paintings that I discussed in chapter two, but in the case of LeWitt, one might ask what kind of musical notations Lippard has in mind. Rather than traditional tonal notation, Lippard likely meant serial notation. In Pierre Boulez's *Structures Ia*, the matrices for "O" and "I" contain twelve horizontal rows and twelve vertical columns of the numbers one through twelve, the number of tones in the dodecaphonic tone row (Figure 3.23). Taruskin refers to these squares as Boulez's "precompositional strategy" for the tone orders and their possible retrogrades.[480] In other words, Boulez develops a sequence strategy for the pitches (transposed to numbers of a scale) and the intervals that may be possible between one pitch and another. In a manner similar to Boulez's serial strategy, LeWitt's *Serial Project 1: ABCD* invites the viewer to attempt to organize the sequence. Like a Muybridge photo series or a Boulez square, however, the individual modules of *Serial Project 1: ABCD* do not make sense individually. Instead, they only function or have meaning in their relationship to the entire structure as a unit, much like a Stockhausen composition that serves as its own discrete unit or Gestalt.

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[478] Lucy Lippard, "Sol LeWitt: Non-Visual Structures," *Artforum* 5 (April 1967): 43.
[479] *Ibid.*, 44.
[480] Taruskin, *Music in the Late Twentieth Century*, 28-29.

Initially, LeWitt did not use a fabricator to produce his sculptures, but instead preferred to make his structures by hand, eventually using white as a non-expressive non-color. In the case of LeWitt's open cube structures (with and without closed forms), he is paradoxically making objects that appear industrial, but are, in fact, handcrafted. A comparable situation exists in Stockhausen's electronic music techniques. Stockhausen first chooses his sonic material as either tones or pre-recorded tape splices. Notorious for his work ethic in the electronic music studio, Stockhausen then spent months or even years on an electronic composition, listening for its morphology. As he has stated,

> I am constantly in the studio listening, and certainly I have become aware that I hear much, much more than anybody else . . . . I am now so used to working with up to [twenty-four] faders simultaneously, and bringing certain instruments or voices in or out, that I can hear a difference of only [one decibel] in some cases . . . .[481]

Even though working with a soundboard, Stockhausen's composition still depends on the human faculty of hearing, and his own aurality, in particular. Thus, the electronic work that seems machine-made has, in fact, a substantial expressive or subjective element of production.

In terms of production, LeWitt's early handcrafted structures differ from his works after 1966, when he began using the Connecticut sculpture fabricator Lippincott, Inc., a company formed by Donald Lippincott in 1966 to produce large-scale sculpture in the manner of an industrial manufacturer.[482] Lippard states that LeWitt's use of a fabricator "abdicates the role of maker and the chance (or temptation) to alter the conception as he executes it."[483] Similar to Boulez's use of the precompositional grid in

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[481] Stockhausen, *Stockhausen on Music*, 138.
[482] Lippincott, Inc., still exists. See http://www.lippincottsculpture.com/history.html.
[483] Lippard, "Sol LeWitt: Non-Visual Structures," 44.

serial works such as *Structures Ia*, LeWitt's technique involves drafting the grid on paper, finalizing the structural sequence, and then letting the fabricator deal with any slight permutations that might arise.

The second phase of LeWitt's work with open and closed modules in his floor structures added a distinctly conceptual element. LeWitt's "Paragraphs on Conceptual Art" present a mini-manifesto on the bases of conceptual art. The following are some of LeWitt's ideas of what conceptual art is: 1) based on an idea or concept; 2) planned before the execution of the idea into an object; 3) does not depend on skill of the artist; 4) not necessarily logical; 5) based on simple ideas that are not complex philosophy or mathematics; 6) not dependent on how the object looks; 7) not perceptual, although there is a paradox between the conceptual and the perceptual; 8) not dependent on viewer understanding; 9) based on process; 10) not architectural; 11) not expressionist; 12) dependent on space, especially if a three-dimensional form is the result.[484] The statements made by the paragraphs are sometimes contradictory; for example, he states in one paragraph that the viewer's perception of the work cannot be controlled and does not matter at all, but later writes that the artist might take the viewer's perception into consideration when choosing the size of the object resulting from the originating idea.[485]

In the thirteenth paragraph, however, LeWitt uses musical language to underscore ideas of the space within or around an object. He states, "It is the interval between things that can be measured. The intervals and measurements can be important to a work of art."[486] In music, an interval consists of two pitches of a harmony and marks the number

[484] Sol LeWitt, "Paragraphs on Conceptual Art," *Artforum* 5 (Summer 1967): 79-80, 83.
[485] *Ibid.*, 80, 83.
[486] *Ibid.*, 83.

of steps between these two semitones. In the context of the serial tone row, the interval has the most important function in deciding the placement of tones. Thus, the module of a LeWitt grid has a conceptual affinity to the semitone of the serial tone row and the perceived irregularities represent the intervals between the tones/modules. Later in that paragraph, LeWitt refers to another musical element, meter, the number of beats per measure; however, he does so in a way that alludes to tonal music far more than musical serialism. He declares, "Regular space might also become a metric time element, a kind of regular beat or pulse. When the interval is kept regular whatever is irregular gains more importance."[487] Meter plays a much lesser role in atonal music, where the sequence of tones on the tone row displaces a listener's sense of expectation of rhythm. While the regular intervals between number of a serial precompositional grid on paper are as critical as LeWitt asserts for heightening awareness of deviations from the system, in a serial compositions later iterations on staff paper, the "regularity" of beat or pulse often becomes secondary.

Charles Haxthausen, continuing the strides Gieskes made in understanding LeWitt's ideas, sculpture, and drawing as part of a musical matrix, argues in the 2012 catalog for the exhibition *Sol LeWitt: The Well-Tempered Grid* that an older musical source may also be relevant. Haxthausen looks to LeWitt's interest in Bach, whose recordings LeWitt collected extensively. When Paul Cummings asked what kind of music LeWitt liked, he responded first with Bach's name, just as Poons had done in his interview with Pincus-Witten.[488] Bach's thirty *Goldberg Variations* show the composer

[487] *Ibid.*, 83.
[488] Sol LeWitt, interview by Paul Cummings, Archives of American Art, Smithsonian Institution, July 15, 1974.

using a sequential "variation" on the bass theme present in the first of the works. Haxthausen, then, compares LeWitt's composition method to that of Bach, stating that LeWitt makes his "scores" unnecessarily complicated in order to bring the viewer to the highest level of experience.[489] Ruminating on Bach's compositional methods for *Canonic Variations on 'Vom Himmel hoch,'* LeWitt told Patricia Norvell, " . . . [W]hen you listen to it, it doesn't sound that [complicated], but it wasn't meant to be listened to."[490] Haxthausen interprets this phrase as meaning that the structure of *Canonic Variations* does not, according to LeWitt, have to be readily understood through hearing. A layperson would not think it that difficult, but a learned ear would realize the depth of the structure.[491]

Both Donald Kuspit and Robert Pincus-Witten wrote responses to the conceptual phase of LeWitt's modular cube structures, from the early 1970s. In these works, the artist included a lengthy written description that was exhibited next to a drawing of the structure and also the physical structure that it described. In a sense, then, the written description forced the viewer to contend with both the originating idea and the resulting objects. Kuspit, in his essay "Sol LeWitt: The Look of Thought," argues that LeWitt's geometric cube pieces demand an intellectual response because they are "theoretical illustrations" that help make his written ideas understood.[492] Yet, in the inverse situation,

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[489] Charles Haxthausen, "The Well-Tempered Grid: On Sol LeWitt and Music," in *Sol LeWitt: The Well-Tempered Grid*, ed. Charles Werner Haxthausen (Williamstown, MA: Wiliams College Museum, 2012), 14-15.
[490] Haxthausen, "The Well-Tempered Grid: On Sol LeWitt and Music," 15.
[491] *Ibid.*, 15.
[492] Donald Kuspit, "Sol LeWitt: The Look of Thought," *Art in America* 63 (September/October 1975): 42-44.

as Kuspit asserts, the "antiquated mathematical language" of the descriptions of the structures "disrupts perception of the simplicity and directness of the drawings."[493]

This issue of perception becomes key because the written descriptions of the wall drawings underlie this idea of the differences between media. For Pincus-Witten, writing in 1973, the written description and resulting drawings are a type of "linguistic equivalence," except that the instructions can seem very open-ended.[494] They disrupt the simplicity of the work and bury the original idea. For example, the text of *The Location of a Rectangle* (1974) states, in part, "A rectangle whose left and right sides are two thirds as long as its top and bottom sides and whose left side is located where a line is drawn from a point . . . ."[495] Robert Smithson was among the first to recognize the textual traps of LeWitt's writing. Smithson wrote in 1968 that "everything LeWitt thinks, writes, or has made is inconsistent and contradictory . . . . His concepts are prisons devoid of reason."[496] LeWitt's written statements almost always appear logical and straightforward, but in fact, sometimes use illogical connections that seem to test the viewer's trust in him as the authorial figure. While the written instructions seemed like faulty logic to Smithson and others, they may more conceptually represent a system of improvisation between the two mediums of writing and drawing.

While Kuspit, Pincus-Witten, and Smithson criticize the obliqueness of the wall drawing process, thinking of it in terms of musical composition makes its lack of logic or reason more of an issue of translation between media. LeWitt's role as composer does not

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[493] Kuspit, "Sol LeWitt: The Look of Thought," 45.
[494] Robert Pincus-Witten, "Sol LeWitt: Word < -- > Object," *Artforum* 11 (February 1973): 69, 71.
[495] Kuspit, "Sol LeWitt: The Look of Thought," 48.
[496] Robert Smithson, "A Museum of Language in the Vicinity of Art," *Art International* (March 1968): 21. Cited in Kuspit, "Sol LeWitt: The Look of Thought," 45.

hinge on legibility. If comparing LeWitt's drawing instructions to Young's event scores or Stockhausen's intuitive music in *Aus den sieben Tagen*, a one-to-one correlation between score and performance need not exist. Instead, the musician, or in LeWitt's case, the draftsperson, improvises upon his event score. He or she would have no other choice but to do so. As with performance, then, the outcomes of every drawing will differ, no matter how stringently the draftsperson attempts to reproduce the same result.

In thinking of the wall drawings as improvisations, their similarity to Young's Theatre of the Singular Event becomes more apparent, particularly with both artists' preoccupation with the concept of the line. Young's directive from 1960 and 1961 to "draw a straight line and follow it" would have similarly indeterminate results to, for example, LeWitt's instruction that reads, "Using a black, hard crayon draw a straight line of any length. From any point." Whereas Young uses an economy of words to yield this open-endedness, LeWitt does the opposite, at times, in providing so many directions that the performer has no choice but to try to envision the instructions as a whole in interpreting the particulars of the composition, as any serious musician would do.

Ultimately, comparing LeWitt's structures and texts to serial composition may have the most heft when using the idea of the Gestalt. Pousseur's *Die Reihe* essay "Outline of a Method" compares the musical experience to Gestalt theory; similarly, a LeWitt only begins to make sense to the viewer who, like Bach's sensitive listener in *Canonic Variations*, measures the work against what he or she already knows. The work of comprehending a LeWitt as a single unit may be compared to the difficulty in listening to serial music, in which the outcome cannot be expected unless one sees the compositional tone grid. As in the case of Stockhausen, who worked serially, but

considered each work its own Gestalt, LeWitt's work has similar parameters. Paradoxically, then, for both serial composition and LeWitt's composition, that which seems open-ended has a fixed sequence and permutations.

In this chapter, I have examined the musical models of the milieu around Stockhausen and the European serialists, arguing that American artists engaged in a trans-atlantic exchange of ideas with this world. In the next chapter, I change course in flipping the criteria of this model. Instead of looking to European music as a source for American art, I look to a European artist embracing the concepts of American avant-garde music and poetry.

Chapter Four: Takis and Musical Sculpture

"And you *hear* metal think as you watch disquieting free floating forms move and click through invisible turnstiles—Cold blue mineral music of thinking metal—You can hear metal think in the electromagnetic fields of Takis."
-William S. Burroughs, Paris, 1962[497]

Introduction

In a 1966 interview with artist and critic David Medalla, the Greek-born kinetic sculptor Vassilakis Takis stated the impetus for creating music through his sculpture. He said, "The Greeks worshiped Apollo, who represented the sun. But Apollo is an inventor . . . . He invented the seven chords of music. Well, inevitably, the sun is music. So I thought that I should not sleep anymore unless I give music, or music through the magnetic waves. No darkness anymore . . . . "[498] This statement says a few things about Takis. First, he knows something about music, or enough to know that there are seven possible chords within an octave. Secondly, he feels a connection among the unseen energies of the sun, magnets, sound, and his own sculpture; further, he optimistically conflates these energies with light, the opposite of darkness. Thirdly, he's interested in his ancient Greek heritage with a flavor of patriotism not uncommon among expatriates after the Greek Civil War of the late 1940s.[499] He wants to emulate Apollo, but not

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[497] "Et on *entend* le metal penser en regardant se mouvoir et décliquer à travers d'invisibles tourniquets d'inquiétantes formes flottant librement—Froide musique minérale et bleue du metal qui pense – Dans les champs électromagnétiques des sculptures de Takis, on entend le metal penser." William Burroughs, "untitled," in *Takis*, ed. Maurice Eschapasse and Blaise Gautier, vol. 6, *CNACarchives Nouvelle Serie* (Paris: Centre National d'Art Contemporain, 1972), 6: 51.
[498] *Eight Artists, Eight Attitudes, Eight Greeks* (London, UK: Institute of Contemporary Arts, 1975), 86.
[499] Takis wrote in 1960, "There are two races of Greeks . . . the one that came from the Orient is not mine, fatalist. The other is the famous race of egoists . . . I am from that group" ("Il y a deux races de Grecs . . . l'une fait partie de l'Orient, elle est sans moi,

Apollo the god; rather, he seeks to fashion his own identity after the image of Apollo the inventor, and specifically, the inventor of music. And lastly, he's ambitious. He wants to do something that only the gods—and now, advanced astrophysics—can do: harness the unheard sounds of the cosmos, the ancient notion of harmony or music of the spheres.

This chapter highlights different ways that sound and music functioned in Takis's early sculpture and the cultural milieu in which he constructed them, including his interactions with American Beat poets and the New York School composer Earle Brown. In probing the mystical and scientific source material for Takis's sculpture from the early 1950s to the late 1960s, this chapter examines two particular series: the *Signau*x (*Signals*) (Figure 4.1) and the *Sculptures musicales* (*Musical Sculptures*, sometimes referred to more simply as the *Musicales*) (Figure 4.2), as well as a particularly formative live performance from 1960 titled *L'Impossible: Un homme dans l'espace* (*The Impossible: A Man in Space*) (Figure 4.3). The discussion of the development of the *Signals*, Takis's earliest series, considers his interest in his Greek ethnicity, his understanding of contemporary astrophysics and astronomy, and his primary visual sources, which include the sculpture of Alberto Giacometti and Alexander Calder. I then analyze the live event *L'Impossible* as an exploration of Takis's interest in the "space race" between the United States and the former Soviet Union and his artistic rivalry with the French artist Yves Klein, including their differing conceptions of the cosmic void. Lastly, this treatment of Takis's void segues to the final section of the chapter, a discussion of Takis's sound-producing sculptures, the so-called *Musicales*. Beginning with a study of the earliest *Musicale*, an installation sculpture titled *Bruit de vide* (*Noise of the Void* or *Sound of Void*

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fataliste; l'autre, c'est la fameuse race d'égoïstes . . . Je suis de celle-ci"). Vassilakis Takis, *Estafilades* (Paris: René Julliard, 1961), 91.

or perhaps *Sound/Noise of Emptiness*) made in collaboration with Brown in 1963, this section explores Takis's use of magnets as a source of music, or organized noise (Figure 4.4).

Takis's musical sculpture came out of a deep engagement with sound, science, and nature and his works from the late 1950s and 1960s show a preoccupation with the synaesthetic capacities of sculpture. The *Signals* and *Musical Sculptures* combined his interests in physics, analog technology, time, Zen Buddhism, and sound waves through the use of various metals, magnets, strings, lights, and speakers. Musically, the *Signals* and *Musical Sculptures* reflect Takis's preoccupation with ancient sonic structures, modernized Zen notions of "struck sound," silence, and the style of open form musical composition pioneered by Brown. In this way, the progression of images presented in this chapter goes from the most silent, and therefore, least functional, to the most sonic.

Born in Athens in 1925, Panayiotis Vassilakis Takis became a self-taught sculptor at the age of twenty-one. A survivor of first the German occupation of Greece during World War II, and then the Greek Civil War from 1946 to 1949, Takis was imprisoned for six months for his role in the local youth resistance movement. He has said that he faced death three times at the onset of near-starvation brought on by war.[500] Curator Jean-Gabriel Mitterand explains the juxtaposition of Takis's Greek sensibility with his history of war, stating, "Takis was born of a revolution . . . mixing his deeply Mediterranean culture and particularly philosophical notions with the roughness of a man elevated by war and poverty."[501] Given these catastrophic disruptions to everyday life during his

[500] *Ibid.*, 77-78
[501] "Tout Takis est né d'une révolte… mêlant à son profonde culture méditerranéenne et particulièrement philosophique la rudesse d'un homme élevé par la guerre et la

formative years, Takis did not have the opportunity to undertake formal musical training as a child.

In his autobiography, *Estafilades* (*Slashes*)—notably written in 1960, before he had begun making the *Musicales* and while he was deeply engaged with the *Signals* series—Takis recalls that his three sisters, who had been sent to live with relatives outside of Greece during the 1940s, were piano students who practiced regularly prior to the war, filling his childhood household with music.[502] However, an overwhelming sense of mourning dominated the musical aspect of Takis's life as a child. He recalls learning sad songs during the German occupation after 1937; he and his family would sing them to pass the time until the expulsion from their family home in 1938.[503] Until his brother Nikos died of starvation after falling ill in 1940, Takis sang songs of mourning at his bedside.[504] By 1953, when Takis made the decision to move to Paris, the singing of patriotic ballads had become a daily ritual for him and his compatriots, fellow resistance fighters, who had also been imprisoned at various points during the war years.[505] The musical nostalgia of Takis's sculpture, therefore, takes on two temporal dimensions. It works with the distant past in evoking a musical legacy of Greek antiquity, but also references a more personal and recent past of the artist's experiences during the war years. The artist's eventual use of piano wires likely indicates a nostalgia for his happy pre-war home and family, though, as discussed later in this chapter, the sturdiness and availability of piano wires speak to the practicality of their materiality.

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pauvreté." Mitterrand Jean-Gabriel, ed., *Takis: Champs Magnetiques, 1960-1990* (Paris: JGM. Galerie, 1990), 3.
[502] Takis, *Estafilades*, 8.
[503] *Ibid.*, 12.
[504] *Ibid.*, 17.
[505] *Ibid.*, 109.

It was not until his move to Paris that Takis experienced a community where music could represent pleasure and possibility rather than loss and mourning. He arrived in Paris in early 1954, an experimental moment in the development of electronic tape music and *musique concrète* in France. There, he became part of the international kinetic art scene, through which he met friends Nicolas Calas, Iannis Xenakis, Marcel Duchamp, Soto, Jean Tinguely, Yves Klein, Pol Bury, and Arman, and he found representation in the dealer and gallerist Iris Clert.[506] Also a poet, Takis spent much of his free time after 1958 in the company of the writers Sinclair Beiles, as well as writer/artist Brion Gysin, and the American Beat poets Allen Ginsberg, William Burroughs, and Gregory Corso, all of whom subsequently dedicated written works to him.[507] This chapter therefore also positions Takis as an artist thinking through the lyrical possibilities of three mediums—sculpture, music, and poetry—by embracing modern and "foreign" ideas. Nicos Poulantzas wrote of the cultural position of Greek artists living abroad, stating, "In our effort to liberate ourselves from our social background, from the suffocating atmosphere of Greek bourgeois society in the post civil war period, our own generation found its way out . . . by turning our attention to foreign languages, foreign books, and foreign thinking in general."[508] Takis's patriotism, therefore, was not one simply drawn from nostalgia for

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[506] Vassilakis Takis, "*Estafilades*," in *Takis: Retrospective*, ed. Alfred Pacquement, and Veronique Dabin (Paris: Editions du Jeu de Paume / Réunion des Musées Nationaux, 1993), 68.

[507] See *Takis*, ed. Maurice Eschapasse and Blaise Gautier, *CNACarchives Nouvelle Serie* for a comprehensive list of poems dedicated to Takis.

[508] Nicos Poulantzas statement "Ta Nea, 8th September 1975," quoted in Christos Joachimedes, "A Storehouse for Perception," introduction to *Eight Artists, Eight Attitudes, Eight Greeks* (London: Institute of Contemporary Arts, 1975), 5. Joachimedes writes in this catalog that the exodus of young artists from Greece in the 1950s, including Takis, Chryssa, and Jannis Kounellis, led to a Greek presence in major metropolitan areas of London, Paris, Rome, and New York.

his homeland; the effects of war and the stifling internal attitude toward the avant-garde complicated his position much further, making him retreat to the ancient past as a source for his modern ideas. Takis explained his problematic relationship with Greek history in a 1991 interview, asserting, "I can't accept the idea that my life has started from the 'middle.' I am seeking the real past. I was born in Greece and, in general, for Greeks the origin is Greece."[509]

Given his interest in music and the celebrated advances of his heritage, Takis felt a patrimonial link to several ancient Greek inventors. These include the mathematician and engineer Archimedes, the geometrician Thales of Miletus, who experimented with the magnetic properties of lodestones, and the mathematician and mystic Pythagoras, who was thought to have first posited the model of the universe as equivalent to musical harmony.[510] The complex history of the music of the spheres dovetails with the histories of music, mathematics, astronomy, and metaphysical philosophy. Moreover, the notion of the music of the spheres has two historical lines of inquiry. Astronomers and mathematicians used the term more figuratively in creating a theoretical framework for understanding the ways that stars and planets moved and interacted with one another in space. Philosophers, composers, and poets, however, used the term more literally in imagining the sounds of the heavens themselves.

Aristotle described Pythagorean universal theory's relation to music in his *Metaphysics*, writing,

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[509] Maria Marangou, *Takis: Hellas, XLVI Biennale di Venezia* (Athens, Greece: Greek Ministry of Culture, 1995), n.p.

[510] For a cultural history of ancient Greek science, see Marshall Clagett, *Greek Science in Antiquity* (New York: Abelard-Schuman, 1955).

> The Pythagoreans, as they are called, devoted themselves to mathematics; they were the first to advance this study, and having been brought up in it they thought its principles were the principles of all things. Since of these principles numbers are by nature the first, and in numbers they seemed to see many resemblances to the things that exist and come into being;…. Since, again, they say that the attributes and ratios of the musical scales were expressible in numbers; since, then, all other things seemed in their whole nature to be modeled after numbers, and numbers seemed to be the first things in the whole of nature, they supposed the elements of numbers to be the elements of all things, and the whole heaven to be a musical scale and a number.[511]

Historian Jamie James has noted that Pythagorean philosophy made distinctions among three types of music: *musica instrumentalis*, or regular music created by instruments; *musica humana*, or the "continuous but unheard music made by each human organism, especially the harmonious (or inharmonious) resonance between the soul and the body;" and *musica mundana*, the sound created by the cosmos, known now as the "music of the spheres."[512] This abstract idea of a musically dominated cosmos, in which both music and the human soul ostensibly reveal a sense of eternity through their intangibility, seemed to explain the mysterious phenomenon of humans gaining spiritual, emotional, and cosmic insight from sound. In the sixth century, the philosopher Boethius created a classification system of music in his treatise *De Musica*. He stated that four types of music exist: *musica instrumentalis*, or the music of objects; *musica humana*, or the music of the human body; *musica mundana*, or the music of the spheres; *musica divina*, or the music of the gods. These ideas had a resurgence in the Renaissance. For example, in 1617, the physicist Robert Fludd argued for a Ptolemaic model of an earth-centric universe that is itself a monochord played by God. Just two years later, Johannes Kepler's

[511] Jamie James, *The Music of the Spheres: Music, Science, and the Natural Order of the Universe* (New York: Grove Press, 1993), 30.
[512] *Ibid.*, 31.

book *Harmonices Mundi* advanced the notion of planetary speeds as analogous to harmonic proportions in music in a Copernican universe. All of this is to say that there is a vast body of ideas to which twentieth-century artists, writers, and composers could respond. For Takis, however, the history begins with Pythagoras.

Pythagoras invented the first known Western string instrument, the monochord, in an attempt to understand and regularize how sounds worked (Figure 4.5). This simple instrument, which was likely used more for teaching demonstrations of the relationships between tones rather than as a musical instrument, consisted of a single string stretched across a sounding box.[513] A user could push a moveable bridge across the string, demonstrating different notes of a single scale. This was, in effect, a way to order something immaterial—sound—and Pythagoras ended up creating the first musical scales.[514] In many ways, Takis represents a modern Pythagoras eager to explore the inscrutable traits of music and the cosmos via new technology.

Pythagorean mysticism was not the only source of cosmic investigation. A major theme of both the *Signals* and the *Musicales* is Takis's interest in the void or emptiness of space coming out of his studies of Zen Buddhism. He had read several Greek translations of Buddhist literature since his teenage years and studied under the Parisian Zen master Robert Godin, who served as his spiritual advisor from 1955 to 1968, when Takis moved to the United States to study under György Kepes in the Center for Advanced Visual

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[513] I thank Dr. Hilary Baker, Lecturer of Music at The Pennsylvania State University at Behrend, for her insight on the pedagogical use of the monochord.
[514] Anonymous, *Pythagoras, Greek Philosopher, Initiate Teacher, Founder of a Brotherhood at Crotona, by a Group of Students*, 2nd ed. (Chicago: The Theosophical Press, 1925), 89-91.

Studies program at MIT.[515] Takis, therefore, channeled his fascination with the unheard music of the cosmos through a study of Zen Buddhism.

In addition to his grounding in Greek philosophy, Takis was also an inheritor of the Greek technology of metal-working. In *Estafilades*, he recalls working in an iron forge on the Rue Odessa in Paris, mentioning several times that he had worked long hours and tiring days in the heat.[516] Takis recounts a conversation in advance of a 1959 collaboration with Yves Klein that never came to fruition, in which Klein told Takis that he could make as many as thirty monochromes a day if he wanted, much to the astonishment of Takis, whose sculptures took much longer to realize.[517] Like a modern Hephaestus in a hot forge in the Montparnasse neighborhood of Paris, Takis came to his work through experimentation with the elements of fire, metal, and the invisible energies of the air. Although he initially learned metalworking through molding and casting representational sculpture, by the mid-1950s, he regularly used found objects, scrap metal, and industrial building products, such as cheap electrical condensers, linking Takis to the junk sculpture aesthetic of artists such as Daniel Spoerri, Jim Dine, and Robert Rauschenberg.

Some of Takis's earliest works made in Paris were forged iron and bronze abstracted human figures inspired by the mythology of his homeland, ancient Kouroi figures, and bronze figurative forms by Alberto Giacometti, such as *Walking Man II*

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[515] Wayne Andersen, "Untitled," in *Takis: Evidence of the Unseen*, ed. Wayne Andersen (Cambridge, MA: Hayden Gallery, MIT, 1968), 19, 21. See Anne Collins Goodyear, "The Relationship of Art to Science and Technology in the United States, 1957-1971: Five Case Studies" (Ph.D. Diss., The University of Texas at Austin, 2002) for a study of CAVS.
[516] Takis, *Estafilades*, 120-125.
[517] Takis, "Estafilades," in *Takis: Retrospective*, 58-59.

(Figure 4.6). *Oedipus and Antigone*, with its skeletal and spindly attenuated forms, seems to reference tragedy figuratively both in subject matter and due to the difficulties of postwar reconstruction in Greece (Figure 4.7). Elena and Nicolas Calas write that these early works "are a modern version of archaic Kouroi, but with heads reduced to a vertical line reminiscent of Giacometti; an impression enhanced by the [reduced] arms."[518] Critics persistently compare Takis's early work to Giacometti's figurative sculptures for good reason: Takis had already known of the Swiss sculptor's work when the two first met as part of writer Caresse Crosby's salon at Delphi in 1954 and remained colleagues until Giacometti's death in 1966.[519] Wayne Andersen, in the 1969 catalog for Takis's exhibition "Takis: Evidence of the Unseen" at MIT's Hayden Gallery, similarly ties the early works to both Giacometti and Kouroi. According to Andersen, the works echo Giacometti's sculpture in that they are "surrealistic, totemic, and sympathetic to primitive sculpture. Their emphatic, upright, heroic stance is easily associated with the archaic Greek kouroi which, like the Sphinx of Egypt, evoke enigmas of unspecified thoughts and feelings."[520]

A wrought iron work from 1954, *Ikaros* (*Icarus*), similarly references Greek mythology while maintaining a stylized metonymic figural structure, where prominent genitals and a single horizontal crossbar behind the shoulders indicate the allusion to Icarus and his failed wings (Figure 4.8). Andersen notes Takis's interest in this subject,

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[518] Elena Calas and Nicolas Calas, *Takis: Monographies* (Paris: Editions Galilée, 1984), 22.
[519] Maria Marangou, *Takis: Hellas, XLVI Biennale di Venezia* (Athens, Greece: Greek Ministry of Culture, 1995), n.p. See also Takis, *Estafilades*, 99-105, for his recollection of meeting Crosby and her circle at Delphi, including Giacometti.
[520] Wayne Andersen, "Untitled," in *Takis: Evidence of the Unseen*, ed. Wayne Andersen (Cambridge, MA: Hayden Gallery, MIT, 1968), 9.

recalling that man's flight into space, the impetus for Takis's 1960 performance work *L'Impossible*, originated with Icarus. Andersen writes, "Takis called Daedalus the greatest artist of all time, and Icarus his masterpiece. Daedalus defied gravity by insisting that man could fly, contrary to all ancient notions of physics."[521]

An even more rare type of early work is Takis's *Seated Goddess*, also from 1954 or 1955, a welded bronze sculpture roughly nine inches tall, which also presents an early experiment with kineticism (Figure 4.9). This small figurine again possesses highly abstracted features; she has a torso and lower body fused into a throne shape, indicating a seated figure, two protrusions indicating feet, two smooth fingerless arms, and an elongated neck and featureless head that resemble a flathead screwdriver.[522] The only indications of femininity are two roughly hewn breast forms modeled just beneath the underarms. Curiously, Takis also smoothed out a groove at the base of the throne and inserted a bronze knob that has the appearance of a drawer pull. The knob, which has the perfect decorative symmetry of a mass-manufactured item, likely a functional object that the artist re-purposed from refuse at the iron forge, turns easily within the hole near the goddess's feet. It has no proper function within the sculpture at all, but humorously

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[521] *Ibid.*, 7.

[522] *Seated Goddess* has an interesting provenance among the twenty-two works by Takis in the Menil Collection in Houston. A note by John de Menil in the curatorial files at the Menil Collection (Object number X547) indicates that he purchased the work from a man named Radama Pera who "peddled" two Takis works at de Menil's home doorstep in Houston in 1965. Pera explained that Takis had given *Seated Goddess* to his then-girlfriend Jane Werner in 1957; Werner in turn gave the work to Pera in 1959. De Menil's assistant, Benedicte Pesle, wrote to Takis to inquire about the technique of producing the work and its provenance. Takis responded in August of 1965 that he had made three versions of this goddess in welded iron, but being unhappy with their appearance, long believed that he had destroyed all three. He concedes that he later saw two of the three goddesses at the Galerie Diderot in Paris and had likely simply given these three "unsuccessful" sculptures to friends in Paris, including Werner.

appears as either a wheel for the goddess's static chair or as a spring-loaded windup knob on a child's toy.[523] Nevertheless, this toggling between motion and stillness in metal sculpture helps explain the thought process behind the dynamism of Takis's longest-running series, the *Signaux* (*Signals*), and his later *Musicales*.

Signaux (*Signals*)

From 1955 to 1964 and periodically to the present, Takis has worked on one of his best-known series, the *Signals*, which he conceived as antennae to the heavens or modernized Aeolian harps that would tap into or actually pierce the void and receive vibratory music from the cosmos. The Aeolian harp, named for the Greek god of the wind, relies on the same basic mechanism of the Pythagorean monochord, but uses multiple strings like an ancient lyre. Musicians do not play the Aeolian harp; instead, the "harps" are left in open air or a window, allowing the wind to drag across the strings, creating natural harmonies. While maintaining the verticality of Takis's earlier figurative work, the *Signals* lose any representational cues and become functional objects. The

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[523] I question the Menil Collection's tentative dating of *Seated Goddess* to 1954. Takis claimed to have made three versions, but believed that he had destroyed them (see the prior footnote for this provenance information). Jane Werner, however, received the sculpture from Takis in 1957, indicating that the sculpture could have been made between 1954, when Takis arrived in Paris, and 1957, when the work was first gifted. I believe that *Seated Goddess* may have been made in 1955 after Takis saw both the exhibition "Le Mouvement" at the Galerie Denise René and an exhibition of Alexander Calder's *Little Toys* in Paris. Takis notes his viewing of the *Little Toys* in detail in *Estafilades*, stating that he first met the collector Peter Watson at the opening of Calder's exhibition and remarked that the gallery left the windows open so that Calder's work, including several of what Takis referred to as "*tiges magiques*" (magical stems, or mobiles), could move freely. Takis told Watson that he found the toys "charming" and marveled that the collector spent $30,000 on one (or more) of the small works because Watson asserted that he did not think of the "*petits jouets*" as art, but as "amusing" toys. Takis also noted that he and Watson met up with Giacometti that evening after the opening; the two sculptors discussed their mutual dismay at their increasing baldness. See Takis, *Estafilades*, 135-136.

Signals created until 1966 are all black, either naturally or via added paint (Figure 4.10). Adopting Calder's idea of the wiry form given agency to move on its own, the black *Signals* have no electronic parts intervening in their function. In 1966, however, Takis started developing a series of *White Signals*, initially exhibited at the Indica Gallery in London, which possess a futuristic shiny white finish and which included light bulbs illuminated by a sensor (Figure 4.11).[524] The intermittent illumination of these electrified *Signals* occurs with loud clicks that interact harmonically with one another and within their exhibition spaces, creating a soundscape enhanced by colored light. Takis wanted the *Signals* to appear to consist of the fewest parts possible. As he stated during the Kinetic Symposium at Berkeley in 1966, "You have to make things appear much simpler than they actually are."[525] As a whole, the series of *Signals* embrace multiple contradictions: disorderliness versus simplicity, stillness versus kineticism, silence versus sound, archaism versus modernity, and reception versus transmission of vibrational energies.

The black *Signals* consist of groups of upright sculptures made of rods of piano wires and often topped with found metal objects intended to encourage movement, although in reality, most of them are visibly static. Air currents sometimes naturally cause the *Signals* with multiple and longer stems to sway; if they touched one another, as Takis had hoped they would, they created music purely by chance. Because they are made with piano wires, which are inexpensive, malleable, and vary in gauge, the *Signals*

[524] For the purposes of this chapter, I will refer to these two parts of the series as either the black *Signals* or the *White Signals* to differentiate those without electrical parts versus those with electric lights.
[525] Vassilakis Takis, *Takis: Magnetic Sculpture and the White Signals* (London: Indica Gallery, 1966), n.p.

serve as percussion instruments whose musicians are the unseen forces of their surrounding atmospheres. Takis had originally hoped that they would move to the point that the wires would touch, creating music incidentally. Due to their fragile nature, however, he had to reinforce them to the point that most of them, in reality, do not have mobile parts.[526] In this case, the artistic intention differs from the outcome.

Acting as metal antennae for cosmic messages, the black *Signals* theoretically receive vibrations from the surrounding atmosphere and in turn create music purely by the chance operations of those vibrations along their metal parts. The artist wrote of his *Signals* of the 1950s, "The *Tiges* [*Stems*] I had been making were antennae to capture the force of nature in the clouds…. In other words, they had been receivers all along…. Even though they moved, my sculptures seemed to me still to be static."[527] In the case of the black *Signals*, the static property also means that the music produced by the *Signals* is at

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[526] For example, a large *Signal* subtitled *Elémentes Animaux (Insectes)* (1956) at the Menil Collection stands at 126 inches tall and has three separate rods attached to the base. With this work, Takis welded larger supports to the lower third of each of these rods, stabilizing them, but also rendering them far less mobile and fragile than they would remain otherwise. Gallery visitors were, however, allowed to physically interact with the sculpture during the exhibition "For Children" held at the Rice Museum at Rice University from May to August of 1971. Menil Collection Curatorial File, Accession Number 78-168E. Accessed September 2012. The Menil Collection, Houston.

[527] Vassilakis Takis, *Takis*, ed. Jonathan Robertson (Athens, Greece: Galerie Zoumboulakis / Athens Publishing Center, 1974), 21. Takis's occasional references to the *Signals* as "tiges" has helped scholars link the *Signals* to plants, particularly given that he crafted a few very abstracted small metal flowers that he called the *Fleurs du Désert* (*Desert Flowers*) in the same period that he made his mythological bronze and iron works. In this comparison, the *Signals* take on the organic properties of flowers striving upward toward the sun, receiving the energy of light. For more on this conflation of the Signals with flowers and plants, see Calas, *Takis: Monographies*, 32 and 112; Guy Brett, introduction to *In Motion: An Arts Council Exhibition of Kinetic Art* (Cambridge, UK: Arts Council, Cambridge, 1966), n.p.; Luce Hoctin, "Untitled Esssay," in *Takis: Dix Ans de Sculpture, 1954 - 1964*, ed. Alexandre Iolas (Paris: Galerie Alexandre Iolas, 1964), n.p.; Vassilakis Takis, "Letter to Alexandre Iolas, June 19, 1961, Paris," in *Takis: Tele-Magnetic Sculpture*, ed. Alexandre Iolas (New York: Alexandre Iolas Gallery, 1961), n.p.

best scant, and, despite the artist's best intentions, inaudible to the human ear. Takis further complicated this perceived silence by insisting that the smaller *Signals* be exhibited above eye level.[528] Though he did this ostensibly to allow for the unobstructed reception of acoustic waves from the atmosphere, it had the effect of creating a further distance between object and audience.

As with the early bronzes, these works often lead to comparisons with Giacometti's reedy figures, not only because of their similarity in thinness, but also due to the attention that they both draw to negative space around them. However, another important source for the *Signals* are the far less expressionistic Calder mobiles, such as *Snow Flurries I* from 1948 (Figure 4.12).[529] Other visual sources for the *Signals* include not only actual electrical antennae, which were a fairly new technology, particularly in radio, but also the kinetic works of Marcel Duchamp and others that Takis had seen in the exhibition "Le Mouvement" at the Galerie Denise René in Paris in 1955 (Figure 4.13).[530]

The *Signals* range in scale from about three feet to over ten feet. Takis recalls working on the *Signals* in the iron forge on the Rue Odessa, building his objects with fire

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[528] Menil Collection Curatorial File, Accession Number Y 322. Accessed September 2012. The Menil Collection, Houston.

[529] Recent sources on Calder include Stephanie Barron, ed., *Calder and Abstraction: From Avant-Garde to Iconic* (Munich, Germany: Prestel, 2013) and Susanne Meyer-Büser, ed., *Alexander Calder: Avant-garde in Motion* (Munich, Germany: Hirmer Verlag GmbH, 2013).

[530] Alfred Pacquement, "Un Socrate Musicien," in *Takis: Retrospective*, ed. Alfred Pacquement and Veronique Dabin (Paris: Editions du Jeu de Paume / Réunion des Musées Nationaux, 1993), 10, 14, 17. See also Alfred Pacquement and Veronique Dabin, ed., *Takis: Retrospective* (Paris: Editions du Jeu de Paume / Réunion des Musées Nationaux, 1993), 281. For a history of kinetic art, see Guy Brett, "The Century of Kinesthesia," in *Force Fields: Phases of the Kinetic* (London: Hayward Gallery, 2000) and Guy Brett, *Kinetic Art* (London: Studio-Vista, 1968).

in the manner of his Greek ancestors.[531] In a photo of Takis in the forge from 1959, he takes on a Beatnik appearance in his black turtleneck and worker's blue jeans, smoking a cigarette while pulling a chain above a fire pit. He is surrounded by metal, either the tools of his craft or the raw materials themselves (Figure 4.14). This demonstrates what his long-time friend, the theorist Felix Guattari, called the paradox of Takis's oeuvre: that his work since 1955 embraces modernity and the spirit of the newness and youth while at the same time referencing the ancient past.[532] In the case of the *Signals*, they are created in a process used by the ancients, metalwork, and they function as devices or instruments of ancient music that date back to Pythagoras. However, unlike Pythagoras's monochord, the *Signals* do not order sound via a human musician, but instead harness it through vibration and release it as a simple open feedback system. This non-human and non-electrical machine is thus both receiver and transmitter, or musician. However, his later works using electricity, and particularly electromagnets, best exemplify the Guattarian paradox of archaism versus modernity because the technology employed by Takis is always on the brink of obsolescence. In this way, the *White Signals*' space age sleekness and clunky analog lighting function easily date them to the mid-century when viewed today.

Human artistic creativity is both at odds with and in concert with the machine aesthetic in Takis's sculpture. Therefore, considering the *Signals*, and ultimately, the *Musicales*, within a framework of human versus non-human activity helps elucidate their sonic functions. While these sculptures are physically activated by non-human means – technology that replaces the musician – they are simultaneously given agency as musical

[531] Calas and Calas, *Takis: Monographies*, 70.
[532] Pacquement and Dabin, ed., *Takis: Retrospective*, 268.

instruments by human perception of sound. Therefore, viewers act as the secondary "receivers" for these musical objects. As Takis told Maiten Bouisset in a 1991 interview, "My first Signals were antennas that rose toward the sky to attempt to capture cosmic energy…. I placed on them all sorts of things, pieces of metal, stones, and electronic pieces that I found. It was important for me to introduce a continuous and living force into my sculpture."[533] As receivers of energy, the *Signals* operate on a basic invisible level of sensation. Alain Jouffroy wrote in 1963 that the *Signals* tap into this sensorial sphere by creating a void around themselves, making the viewer aware of energy. In this way, the *Signals* are not just receivers, but "pure receptacles" for the energy of the atmosphere.[534] And yet, the earliest *Signals* do this by purely analog means.

The early cybernetic theory of Norbert Wiener and Ross Ashby, roughly concurrent with the years that Takis made his *Signals* and *Musical Sculptures*, helps to highlight some of the paradoxes persistent in Takis's work; namely, work versus play, human versus non-human activity, and technology versus archaism. Some of the earliest basic principles of cybernetic theory assist in contextualizing Takis's machines as purposefully "anti-entropic" even as they experience entropy or technological obsolescence themselves.

In his 1948 book *Cybernetics*, MIT mathematician Norbert Wiener defined the field of cybernetics as "the science of control and communication, in the animal and the

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[533] "Mes premiers signaux étaient des antennes qui s'élevaient vers le ciel pour tenter de capter l'énergie cosmique…. J'y ai mis toutes sortes de choses, des morceaux de metal, des pierres, des pièces électroniques que je trouvais. Il s'agissait pour moi d'introduire dans la sculpture une force nouvelle continue et vivant." "Takis, Hier et Aujourd'hui," interview by Maiten Bouisset, in *Takis*, ed. Renos Xippas (Paris: Galerie Renos Xippas, 1991), 22.

[534] Alain Jouffroy, "Telemagnetism of Takis," trans. A. Gotz, introduction to *Takis*, ed. Alexandre Iolas (New York: Alexandre Iolas Gallery, 1963), n.p.

machine."[535] In his 1950 book *The Human Use of Human Beings: Cybernetics and Society*, intended to clarify his earlier treatise for the layperson, Wiener explained that cybernetics is, furthermore, primarily about the control and communication of messages, or information, between in the realms of humans, animals, and machines.[536] In 1952, British psychiatrist W. Ross Ashby had published his influential book *Design for a Brain*, in which he wrote of the possibilities of creating learning machines or automata that not only sense signals given to them, but also have the capacity to respond in a variable manner.[537] Wiener liked to use the example of the automatic doors at Penn Station in New York as such a thinking machine, but also very presciently saw the possibilities of cybernetics in the fields of computing, robotics, medicine, and prosthetics.[538] Writing *Cybernetics* in 1948, Wiener carefully assesses the situation around the ultra-rapid development of machines and technology and human reliance on them, writing:

> Long before Nagasaki and the public awareness of the atomic bomb, it had occurred to me that we were here in the presence of another social potentiality of unheard-of importance for good and for evil . . . . For one thing, it makes the metaphorical dominance of the machines . . . a most immediate and non-metaphorical problem. It gives the human race a new and most effective collection of mechanical slaves to perform its labor . . . . It may very well be a good thing for humanity to have the machine remove from it the need of menial and disagreeable tasks, or it may not. I do not know.[539]

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[535] Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York / Paris: John Wiley and Sons, Inc. / Hermann et Cie., 1948), 1.
[536] Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society*, 1954 ed. (New York: Da Capo Press, 1954), 1.
[537] *Ibid.*, 37-38. Here, Wiener writes, "The result is that in Ashby's machine, as in Darwin's nature, we have the appearance of a purposefulness in a system which is not purposefully constructed simply because purposelessness is in its very nature transitory."
[538] *Ibid*., 23.
[539] Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York / Paris: John Wiley and Sons, Inc. / Hermann et Cie., 1948), 27.

By the second edition of the *Human Use of Human Beings* in 1954, however, Wiener seems much more at ease with the potential for good with learning machines. He credits Ashby's notion of "the unpurposeful random mechanism which seeks for its own purpose through a process of learning," discussed in *Design for a Brain*, with presenting an alternate view of the engineering of machines as a pointless endeavor in the face of the second law of thermodynamics, that of entropy.[540] Asserting that science has as its most basic goal to seek order in a world trending toward disorder and entropy, Wiener writes, "There are local and temporary islands of decreasing entropy in a world in which the entropy as a whole tends to increase, and the existence of these islands enables some of us to assert the existence of progress."[541]

Takis, too, seems to have grappled with the complex ethical ramifications of technology in modern society, particularly in regards to war and transportation. As he began constructing his series of *Signals* in 1955, he traveled to London for the opening of his first solo exhibition, "Figures in Plaster and Iron," at the Hanover Gallery.[542] Remembering his return through the newly constructed rail station in Calais, a thoroughly modernized technological landscape, Takis wrote of the rail station, "The [Calais] station had iron at its center. I looked around: it was a forest of signals. The eyes of monsters flicker and fade, the rails, the tunnels, a jungle of iron . . . . Man fabricated these tunnels,

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[540] "I believe that Ashby's brilliant idea of the unpurposeful random mechanism which seeks for its own purpose through a process of learning is not only one of the great philosophical contributions of the present day, but will lead to highly useful technical developments in the task of automatization." Wiener, *The Human Use of Human Beings: Cybernetics and Society*, 38.
[541] *Ibid*., 36.
[542] Pacquement and Dabin, *Takis: Retrospective*, 280.

these exits, these symbols [the signals] to escape death."[543] Perhaps recalling Takis's experiences of mechanized war, the electrified signals used as communication devices connote sinister intentions. These machines create visual messages for humans, but Takis's *Signals* intercept cosmic non-visual messages.

György Kepes, in his introduction to the 1969 exhibition catalog for "Takis: Evidence of the Unseen" at MIT, alluded to the usefulness of cybernetic theory for the study of Takis's *Signals*. He wrote, "Our world is given to us in an endless stream of signals filled with coded messages, decodable, as Norbert Wiener put it, only by ' . . . whom it may concern.' Countless messages of meaning and feeling reach only those who can wonder."[544] Kepes thus not only speaks to the *Signals* as decoders of messages, but also reinforces Takis's own notion of himself as a clairvoyant seer (or in this case, listener) of cosmic communications. For Takis, however, the *Signals*, when exhibited together at the Musée d'Art Moderne de la Ville de Paris in 1956, seemed to him to present themselves less as a forest of ominous portents, but instead "as electrical antennae, as lightning rods."[545] Therefore, when grouped together, he perceived them not as negative symbols of technology whose *outgoing* messages signified war, escape, or death, but instead as receivers of electrical energy, and therefore of strength and increasing energy, the opposite of entropy.

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[543] "La gare était un grand centre ferroviaire… Je regarderai autour de moi: c'était une forêt de signaux. Des yeux de monsters s'allumaient et s'éteignaient, des rails, des tunnels, une jungle de fer… L'homme se fabrique à son usage des tunnels, des issues, des symbols pour échapper à la mort." Takis, *Estafilades*, 132-33.

[544] György Kepes, "Introduction," in *Takis: Evidence of the Unseen*, ed. Wayne Andersen (Cambridge, MA: Hayden Gallery, MIT, 1968), 1.

[545] "Comme des antennas électriques, comme des paratonnerrres." Takis, *Estafilades*, 150.

Here, the notion of human versus mechanical labor has several implications. First and foremost, the process of creating required intensive labor for the artist. But there is other human work involved here, and that is the work of perception and listening by the viewer, which, because music is a time-based medium, must naturally take place over some period of time. Add to it that the sound coming off the *Signals* is largely inaudible and the act of listening to their concerts becomes a Sisyphean task. With the black *Signals*, Takis introduced a highly problematic element for the reception and transmission of energy: he unified the appearance of the objects by coating most of their parts with black paint.[546] Theoretically, this coating of paint would only dull the object's ability to receive and emit vibrations by acting as a physical barrier between atmospheric energy and metal. A coated piano wire would certainly lose some of its natural timbre. What is more, physical distance between the sculpture and the viewer becomes a major factor due to the artist's insistence that his smaller *Signals* be exhibited above eye level, as mentioned earlier.[547] This creates not only further distance for sensing the vibrations coming off the sculpture, but also forces an uncomfortable viewing position. Further to this, one must physically move around the sculpture to apprehend its different parts, all of which are not apparent at any given angle.

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[546] I thank Erin Stephenson, paintings conservator at the Menil Collection in Houston, for her insights on Takis's materials during several conversations in the object storage areas during 2012 and 2013. Stephenson's analyses of the surfaces of Takis's works, including infrared imaging, revealed a regular use of flat black paint pigment coating the *Signals* in the Menil Collection.

[547] Menil Collection Curatorial File, Accession Number Y 322. Accessed September 2012. The Menil Collection, Houston. Depending on the scale of the *Signals*, they may or may not need a pedestal in requiring that the viewer look up to see the objects topping the metal rods. This creates the viewing situation, however, where one sees only the undersides of the metal toppers.

Therefore, the optimal viewing experience of the *Signals* would require viewers to circumambulate a pedestal, craning necks, eyes, and ears over an extended period of time in order to receive the intended message. Yet, as evidenced by one of his notes on the *Signals*, Takis considers the role of the human – or perhaps a cosmically conscious super-human – in his working process (Figure 4.15). Here, he has invented a numerical system for parts of the body and notated it below.[548] Does this figure represent parts of a *Signal*, and if so, how? This strange numbered figure may be a prefatory drawing related to a *Signal*, much like Takis's use of prefatory blueprints, a practice he adopted once he later started using magnets. It seems, however, that he may be working through how a body would receive the energy of a Signal. Perhaps as the Signals themselves experience entropy, their function in transmitting vibrational energy to humans serves as a negation of entropy.

One could consider these machines purposefully anti-entropic even as they themselves experience entropy. While Takis had a utopian intent for these objects, which one may think of as machines that perform work with a goal of making the unstruck sound heard, they are at the same time quite fragile and made of components that either fail, or in their brief modernity, become archaic technologies. And given Wiener's prediction of the use of cybernetics in the field of prosthetics, might it be useful to think of Takis's machines as prosthetic voices that work with human ears to simulate the

[548] I thank Dr. Catherine Yared and Ms. Sofia Papasakelariou of Houston, TX, for their help translating the largely illegible handwritten text in October of 2012. The upper portion of the text appears to be a note to Takis's studio assistant, reading "Thanassia, you need to increase the radius of number 48. That is increase its strength."

experience of unheard sound, even if limited to a finite time?[549] Can we, in this context, consider the archaism of Takis's *Signals* as a form of cybernetic progress?

In 1958 and 1959, Takis made two discoveries that profoundly shaped the direction of his sculpture. He first learned that magnets and electromagnets could draw upon the earth's natural magnetic fields and invisibly aid him in setting his sculpture in motion, alleviating the tricky problem of the *static* kinetic sculpture. He wrote several journal notes about going to the library and doing as much research as he could on the history and use of magnets and magnetic fields, though it remains unclear exactly what kinds of things he researched.[550] It is not surprising that magnets caught his attention at this moment, though. Practitioners of ancient medicine and acupuncture, including the ancient Greeks, had used magnets for thousands of years, and the history of electromagnetism dates to the early nineteenth century, when scientists such as Hans-Christian Oersted, André-Marie Ampère, Michael Faraday, James Clerk Maxwell, Heinrich Hertz, and finally Albert Einstein made important discoveries related to magnetic fields, electricity, and optics.[551]

However, in the 1950s and 1960s, there were major advancements in the fields of bioelectromagnetism, the study of the electrical and magnetic fields produced in the

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[549] The faculty of human hearing inevitably weakens over time as the epithelia of the inner ear, which receive sonic vibrations, become shorter. In this way, one might think of the human ear as an entropic organism.

[550] Pacquement and Dabin, *Takis: Retrospective*, 59-61. See also Takis, "Extracts of Texts by Takis," in *Takis*, ed. Jonathan Robertson (Athens, Greece: Galerie Zoumboulakis / Athens Publishing Center, 1974), 23.

[551] Gerrit Verschuur, *Hidden Attraction: The History and Mystery of Magnetism* (New York: Oxford University Press, 1993), 7-42, 107-123. For histories of magnetism and electromagnetism, see e.g. Herbert W. Meyer, *A History of Electricity and Magnetism* (Cambridge, MA: MIT Press, 1971), 1-7, 198-259 and Brian S. Baigrie, *Electricity and Magnetism: A Historical Perspective* (Westport, CT: Greenwood Press, 2007), 1-6, 93-104.

tissues of living organisms, and bioelectromagnetics, the study of the effects of magnetic fields on living organisms. This led to the discovery of electroreception in migratory birds and some amphibians and reptiles that rely on a sense of the magnetic fields of the earth via a biofeedback loop for survival. Bioelectromagnetics also ushered in the development of arguably the most important medical advancement of the late twentieth century, the MRI, or magnetic resonance imaging, which made international news in 1960 when the Soviet doctor Vladislav Ivanov first filed for an MRI machine patent in Leningrad.[552] Takis wrote of his own understanding of magnetism as related to the music of the spheres,

> I suspected that space had sound—and that it was transmitted by the electrons. I heard music from space and I was sure the moon had magnetism. . . . Then in 1964, they discovered cosmic sound (the moon did have magnetism). But a scientist is in a difficult position. He may know there is sound coming from space but he cannot publish until he has proved it . . . .[553]

Takis made a second useful discovery in 1959, when he saw RADAR utilized during a trip to an airport and became fascinated with this idea of invisible communication, especially with regards to his goal of making the harmony of the spheres audible.[554] RADAR, an acronym for Radio Detection and Ranging, uses radio waves to determine position relative to a reference point; in aeronautics, this is usually a metal object in a given space. Takis had first seen RADAR in use in news footage regarding the

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[552] James Mattson and Merrill Simon, *The Pioneers of NMR and Magnetic Resonance in Medicine: The Story of MRI* (Ramat Gan, Israel: Bar-Ilan University Press, 1996), 4-6. See also Jaakko Malmivuo and Robert Plonsey, *Bioelectromagnetism: Principles and Applications of Bioelectric and Biomagnetic Fields* (New York: Oxford University Press, 1995), 3, 5, 11-23, 240.
[553] Takis, "Extracts of Texts by Takis," in *Takis*, 22. For a complete study of magnetism in the arts, see Douglas Kahn, *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts* (Berkeley: University of California Press, 2013).
[554] Calas and Calas, Takis: Monographies, 110.

Battle of London in 1946, but it was his eyewitness account of seeing RADAR in an airport that encouraged his use of RADAR as a source.[555] As Takis wrote of this experience in the late 1950s,

> A frequent traveler by plane, I was always enchanted by aerodromes and their great radars which turned slowly searching for metallic objects hovering in space. It is as if they were gigantic instruments recording cosmic events. . . . My *Signals* took the form of electrical antennae, like lightning conductors. But they still . . . constituted a modern hieroglyphic language, which had to be translated to be understood. Radar was a great active signal . . . . If only with an instrument like radar I could capture the music of the beyond. . . . If this object could capture and transmit sounds as it turned, my imagination would be victorious.[556]

Around the same time, he started using microphones and speakers to amplify the sound created by his sculptures, skirting the problem of the largely perceptual silence of the *Signals*.

In the late 1950s and very early 1960s, Takis completed a number of magnetic and electromagnetic sculptures that consist of a central magnet or electromagnet around which radiates a series of metal objects tethered to a wall by string. His *Système de Radar Magnétique* (1959) combined his interests in RADAR and magnets (Figure 4.16). In this work, a still magnet attaches to a pedestal and metal limbs telescope outward from the central base. Folded metal cones hanging from the telescoping arms by fishing wire attract naturally to the still magnet. This entire installation, then, becomes a closed system of metal and the invisible magnetic force pulling them together. Notably, when attracted to the central magnets, the metal objects suspended from strings develop a spiraling movement when demonstrating the spiral shape of magnetic fields. For Takis, this takes on a spiritual dimension. Again tapping into the idea of gathering unseen forces in the

[555] *Ibid.*, 22-24.
[556] Takis, "Extracts of Texts by Takis," in *Takis*, 22.

cosmos through the simplest means, Takis wrote, "My intention is not to make something complicated; for me, just a piece of magnet and a nail floating there can make me meditate."[557] In this way, magnetism itself becomes the major medium of his sculpture and, eventually, the musical agent.

L'Impossible: Un homme dans l'espace (1960)

The notion of a taxing viewing experience of the *Signals* coupled with the association of immortality points toward another important concept for Takis: the idea of making the impossible possible. In 1959, as a pro-Soviet leftist, Takis became interested in the machinations of Khrushchev's Soviet cosmonaut program, the impetus for the "space race" between nations attempting to send a human into orbit. He was not alone; his friends Klein, Tinguely, and Piero Manzoni also fed on bits of daily news of competing space programs, particularly that related to the Russian cosmonaut Yuri Gagarin, and felt pressure to create levitating sculpture, or sculpture that defied the laws of gravity.[558] Stephen Petersen's essay "Innovation and the Rhetoric of Plagiarism: The Klein / Takis Rivalry" explains how the artists in Iris Clert's gallery circle fought to create sculpture that could float.[559] Takis had actually met Klein initially through their mutual study of Zen under Robert Godin and felt that Klein had an inaccurate perception

[557] Peter Selz, Harry Kramer, and Vassilakis Takis, "Extract from Kinetic Symposium, University of California, Berkeley, March 1966," in *Takis: Magnetic Sculpture and the White Signals* (London: Indica Gallery, 1966), n.p.
[558] Stephen Petersen, "Innovation and the Rhetoric of Plagiarism: The Klein/Takis Rivalry," *Visual Resources* 16 (2000): 159-160. Yuri Gagarin eventually completed the mission Vostok I in 1961, where he was the first man in outer space.
[559] Petersen, "Innovation and the Rhetoric of Plagiarism: The Klein/Takis Rivalry."

of the Zen void, or emptiness of space.[560] For example, in 1960, Klein had toyed with the concept of emptiness by removing all of the paintings from a gallery, attempting to "exteriorize his sensibility" into the space, and exhibiting the void as his own work.[561] Takis argued that this was just a sleight of hand and not a serious investigation of the void. Also in 1960, both Takis and Klein were in a race to see who could levitate a human by invisible means.

On November 27, 1960, Klein released his famously doctored image *Leap into the Void* in the Paris paper *Dimanche* (Figure 4.17). Two days later, Takis staged the event titled "The Impossible: A Man in Space" where he momentarily suspended the South African poet Sinclair Beiles in the air via magnets (Figure 4.18). Although his event followed the release of Klein's photo, Takis felt that Klein's photo was a mere trompe l'oeil compared to his own event, in which a man truly had come crashing down to earth (although, it should be noted, no poet was injured in the process).[562]

During the event, Takis launched Beiles into the air, where he was suspended in the air by electromagnets, but quickly fell into the safety net provided. During his "flight in space," Beiles had planned to read a statement he called the *Magnetic Manifesto* (Figure 4.19). Though he got only through the first line, "I am a sculpture," before

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[560] Andersen, "Untitled," in *Takis: Evidence of the Unseen*, 19, 21.
[561] For further discussion of Klein and space, see Stephen Petersen, *Space-Age Aesthetics: Lucio Fontana, Yves Klein, and the Postwar European Avant-Garde* (University Park, PA: Pennsylvania State University Press, 2009). See also Pierre Restany, Nan Rosenthal, and Thomas McEvilley, eds., *Yves Klein, 1928-1962: A Retrospective* (New York: Wittenborn Art Books, 1982). Linda Henderson also discusses Klein and his push to "exteriorize his sensibility" in Linda Dalrymple Henderson, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*, revised ed. (Cambridge, MA: The MIT Press, 2013).
[562] Petersen, "Innovation and the Rhetoric of Plagiarism: The Klein / Takis Rivalry," 160-161.

falling, it is interesting to note the cybernetic content of the rest of the manifesto. He first compares his image to a nuclear bomb, then writes of himself as a "long-lived machine man, sub-human, or super-human," and finally, speaks of being taken to "witness Takis making another sculpture from the actual mechanism of a hydrogen bomb."[563] The magnet is the agent that has created this machine-man, sub-human, super-human and he is, indeed, a sculpture with thoughts and desires, like one of Ashby's thinking machines. This notion of a levitating sculpture that emits sound—in this case, a spoken pronouncement—became a primary goal for Takis's *Musicales*.

***Sculptures Musicales*: Takis and Earle Brown**

Takis's work in audible sound-producing sculpture began with a collaboration: the 1963 installation *Bruit de vide* (*Sound of Void*) (Figure 4.4). Takis and the American composer Earle Brown created *Sound of Void* specifically for the January 1964 exhibition called "For Eyes & Ears" hosted by the Cordier & Ekstrom Gallery in New York. As a starting point for Takis's work with musical sculpture, *Sound of Void* amalgamates and streamlines various sources, including new music, Zen Buddhism, and mobile sculpture. The sculpture also points to the dissemination of music ideas coming from New York in that it represents a connection between a European artist and an American composer. Significantly, though, it is not John Cage whose ideas have informed this artist, but Earle Brown, a contemporary of Cage's who has been much less visible in art historical scholarship.

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[563] Vassilakis Takis and Sinclair Beiles, "Programme Élaboré en 1961," in *Takis: Retrospective*, ed. Alfred Pacquement and Veronique Dabin (Paris: Editions du Jeu de Paume / Réunion des Musées Nationaux, 1993), 100.

The record remains unclear as to exactly how Takis met Earle Brown, but it was likely during one of Brown's long stays in Paris in 1962, and possibly with Marcel Duchamp as intercessor. Though Brown had been a colleague of Karlheinz Stockhausen and the *Die Reihe* era composers and taught on the faculty at Stockhausen's summer courses, he divided his time between Paris and New York through much of the 1950s and 1960s, affording him a long view into the ways that European and American composition cohered and differed. Brown was one of the New York School composers, along with his friends John Cage, Morton Feldman, Christian Wolff, and David Tudor, but had been a mathematician and a jazz trumpet player in his early twenties.[564] Brown was married for many years to the dancer Carolyn Brown, a member of the Merce Cunningham Dance Company, and these relationships fostered his interest in the visual possibilities for scoring his compositions, particularly in giving a sensation of movement.

Takis had long admired Duchamp's work before he met the elder artist in person in 1961. Wayne Andersen writes that it was Duchamp who introduced Takis to the idea that an artist could be free from a work of art. Additionally, Takis would have responded to Duchamp's own interest in physics, including electromagnetics, as evidenced in his *Large Glass* project and notes.[565] Takis had sent Duchamp a copy of his book *Estafilades*; intrigued, Duchamp invited Takis and their mutual friend Elena and Nicolas Calas for a visit in 1961. During the visit, Duchamp asked his wife Teeny to gather some magnets. He then arranged the nine magnets in a cylindrical composition where the

[564] Earle Brown and John Yaffé, "An Interview with Composer Earle Brown," *Contemporary Music Review* 26, no. 3/4 (Summer 2007): 289-290.
[565] For further information on Duchamp's use of physics, see Linda Dalrymple Henderson, *Duchamp in Context: Science and Technology in the Large Glass and Related Works* (Princeton, NJ: Princeton University Press, 1998), chapter 8.

magnets repelled one another, creating gaps of air and leaving a neutral central magnet. Duchamp declared, "Voilà Takis, this is your portrait" and the magnets tumbled from their precarious composition, ending the event.[566] Further demonstrating his interest in the young Greek sculptor's play with magnetism, Duchamp wrote a dedication for the catalog of the 1962 exhibition "Takis" at Arturo Schwarz's Galleria Schwarz in Milan. In this prefatory text, Duchamp referred to Takis as a "gay laborer in the magnetic fields."[567]

Brown likewise admired Duchamp, particularly for his ideas of "canned chance," and had initially met Duchamp through Cage, reporting that the first interaction created in a "tremendous feeling" toward the possibilities of mixing music, painting, dance, and theater.[568] Additionally, Brown also recognized the spontaneity of the Abstract Expressionist artists, the sculpture of Max Ernst (also a friend), and the mobility of Calder's sculpture as major sources for his composition.[569] By the time Brown met Takis, he had already established his reputation as a pioneer of open form composition, which allowed for controlled improvisation on the part of conductors and musicians.[570] In compositions such as *25 Pages for 1-25 Pianos* of 1953 and *Available Forms I* and *II* from 1961 to 1962, Brown fully scored and notated different parts, but intended for the conductor or musician to arrange them or play them in any order that he or she wished.

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[566] "Takis, Hier et Aujourd'hui," interview, in *Takis*, 22-23.
[567] "Par consequent Takis, gai laboreur des champs magnétiques et indicateur des chemins de fer doux. Marcel Duchamp 62." Alfred Pacquement, "Un Socrate Musicien," in *Takis: Retrospective*, ed. Alfred Pacquement and Veronique Dabin (Paris: Editions du Jeu de Paume / Réunion des Musées Nationaux, 1993), 14. In an interesting connection to railroad sounds, the first *musique concrète* composition was titled *Etude aux chemins de fer*, made by Pierre Schaeffer in Paris in 1948, and spliced several recorded sounds made by trains.
[568] Brown and Yaffé, "An Interview with Composer Earle Brown," 297.
[569] *Ibid.*, 295-299.
[570] Earle Brown and Amy C. Beal, "An Interview with Earle Brown," *Contemporary Music Review* 26, no. 3/4 (Summer 2007): 345-348.

Yet, Brown is best known as a pioneer of graphic notation by way of one of his most experimental works, *December 1952* from the series *Folio* (Figure 2.20).

The score for *December 1952* uses no traditional notation for pitch or time and consists of a series of black horizontal and vertical rectangles placed irregularly on the blank page. It may be interpreted as a directive for performers to play whatever they would like in an orderly and geometric fashion. This score connects to Calder's mobiles, a major visual source for Brown's graphic music, in that both use hard-edged forms in a manner that seems to defy a singular orientation. However, the score is also appreciated as a visual object in its own right and links aesthetically to Piet Mondrian's early "pier and ocean" type compositions, such as *Composition in Line* from 1917 (Figure 4.20). Here, Takis's notion of the perception of simplicity applies: while the score for *December 1952* appears simple, the open-endedness makes it complex, especially for an ensemble charged with improvising on the score and playing it more than once. Demonstrating the give and take between composers and artists at the moment, Brown's use of improvisation was a major cultural source for *Sound of Void*.

Prior to creating this sculpture, Takis had been tinkering with voltage proportions and cathode tubes, producing colored balls of light in works that he called *Télélumières* (Figure 4.21). *Sound of Void* (Figure 4.4) relies on its backboard to serve as a frame. It has an unlit cathode tube, on the top left, attached to an electromagnet, the coiled object at bottom right.[571] Behind the backboard, as close to the cathode tube as possible, Takis

[571] This photo presented in this dissertation is the only photo used in Takis scholarship and likely the only existing photo of the work. Therefore, the colors of the backboard, wires, and electromagnet are unknown. Further, the whereabouts and provenance of this object are a mystery and the business records of Alexandre Iolas, Takis's long-time dealer, seem to be missing. Geraldine Aramanda, archivist at the Menil Collection for

attached a contact microphone and a sound filter. The black-and-white target-looking object fixed to the upper right portion of the backboard is a speaker. When switched on, the electromagnet emits a low electric current that heats the cathode filaments, but does not ignite them. The heating of the filaments creates a hum within the cathode case. The hum is then run through the sound filter, which takes out the highest and lowest frequencies, making it more audible, and then amplified by the contact microphone. The amplified sound lastly travels back to the viewer through the black-and-white speaker on the front on the backboard. Takis built the mechanism and Earle Brown contributed by "tuning" and amplifying the hum, a task that would have come easily to Brown given his work as a recording engineer (a *Tonmeister* in German) for Capitol Records in Germany in the mid-1950s.[572] Jean-Yves Bosseur writes that *Sound of Void* helped refine Takis's concept of using objects as receivers rather than as sound sources. Even more importantly, in relation to Brown's work with open form composition, "*Sound of Void*'s physical and mechanical properties alone make up the 'score', which plays continuously once the process is set in motion."[573] Employing this construct of amplification and

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several decades, worked with me throughout 2012 and 2013 to attempt to gain access to the Iolas records, to no avail. Material related to the work may exist in the archives of Takis Kete, Takis's foundation in Athens, but the artist and foundation are at present absolutely unwilling to open the archive to scholars and other archivists. I am grateful to Erin Stephenson, conservator at the Menil Collection, and Maria Kokkori, conservator at the Art Institute of Chicago, who traveled to Athens on a Mellon Foundation grant in June of 2013 to interview Takis about a painted work in the Menil Collection, *Magnetic Painting #7*, 1962. Stephenson and Kokkori generously brought along my research questions as part of their interview, but unfortunately, the artist was incapacitated or uncooperative for much of the interview and his memory of *Sound of Void* is hazy at best. I also thank Giorgos Nakoudis, director at Takis Kete, for his email communication and assistance in contacting Takis.

[572] Beal and Brown "An Interview with Earle Brown," 342.

[573] Jean-Yves Bosseur and Alexandre Broniarski, *Sound and the Visual Arts: Intersections between Music and Plastic Arts Today* (Paris: Dis Voir, 1993), 83.

object receivers, Takis used this transitional sculpture as a starting point to begin experimenting with sound-producing sculptures in his efforts to "capture the music of the beyond."[574]

Sound of Void differs from the *Signals* in that it harnesses audible sound before releasing it. It also lacks the comparatively more streamlined appearance of the *Signals*; in the *Télélumière* series with cathode tubes, Takis chose not to conceal the mechanical apparatus. This revelation of the technological means combined with rough workmanship gives the sculpture a hand-crafted appearance that appears even sloppy at times. It lacks symmetry and evenness, and the artist has left at least four drilled holes unpatched in the upper right quadrant of the backboard. It has the pieced-together feel of a science project rather than as an art object meant to be viewed in a gallery. The unpatched holes and exposed wires indicate an emphasis on function rather than aesthetic concerns; it seems logical that Takis experimented with the placement of the speaker for optimal auditory results. One might think of this human-machine relationship as a feedback loop, especially if one considers that the bioelectromagnetic signals in the human body of the observer probably affect the magnetic fields of the sculpture, and therefore of the noise being filtered. Even if he had worked out the entire mechanism by blueprint, Takis could not have predicted the ultimate outcome of the sound, making this a phenomenological experiment in line with Duchamp's *Three Standard Stoppages*, an experiment in dropping meter-length threads. The element of "canned chance" leads to indeterminate results.

[574] Calas and Calas, *Takis: Monographies*, 210.

There is a bit of paradox at play here regarding Takis's professed interest in simplicity. His opting for a transparency of *most* of the operations appears to give some agency to the musical sculptures as self-operating over time. And while they are clearly man-made, giving them the agency to run themselves also seems to tap into the great mysterious workings of the cosmos. Like small heavenly bodies, the cathode filaments crackle and sway in relation to one another, creating a microcosmic version of the music of the spheres. And so we have it: the sublime universe enclosed in a tiny cathode tube. But it is still a machine, and all machines will experience cybernetic entropy, just as the universe itself and Apollo the sun will experience entropy as a thermodynamic certainty. More than any Greek mythological tale from Takis's ethnic past, this entropy of energy may be the ultimate tragedy.

Luckily, for a practitioner of Zen, the rhythms of entropy do not have to have such catastrophic or pessimistic implications. The void is a central tenet of Zen Buddhism under the premise that meditation on a void, or literal nothingness, can clear the mind and lead one to an enlightened state of expanded consciousness. In addition, early Buddhist thought suggested that one could tap into a higher level of being through music when using sound as a form of meditation. Some Buddhist belief also espoused meditation on the unheard sound of the cosmos, or the music of the spheres. The title *Sound of Void* almost functions as a Zen *koan*. The void itself exists in the cathode tube, leading one to ask what is the sound of this given void? With this work, however, Takis takes out the

guesswork by amplifying the sound inside that empty space. In a sense, he lets the viewer in on the music of the spheres.[575]

Considering the exhibition for which Takis and Brown made *Sound of Void* assists with the analysis of this elusive transitional sculpture in highlighting the international scope of the cultural milieu in which it was made. The exhibition "For Eyes & Ears" ran from January 3rd to January 25th,1964, and included twenty-seven works of art and a sound installation by Billy Klüver, who later helped found the Experiments in Art and Technology group. The Cordier and Ekstrom Gallery organized the exhibition in collaboration with Nicolas Calas, Takis's long-time friend and supporter.[576] Calas, a Greek expatriate, had been involved in Surrealist circles in Paris and New York and had encountered Duchamp in this context. Like Takis, Calas tended to favor ancient systems at play in the modern world, writing in the exhibition brochure, "Synaesthesia… suggests

[575] The title *Sound of Void* may also have been a reaction to a 1959 recording that Klein had released and for which he received critical praise, the title of which is *Musique du Vide (Music of the Void)*. This was a recording of Klein's *Symphonie Monoton-Silence*, which he started in 1949; this work featured twenty minutes of a single tone followed by twenty minutes of silence, a Zen-like meditation. Concerts of the *Symphonie Monoton-Silence* took place in Paris in 1957, 1960, 1961, and at Klein's wedding in 1962, just a few months before his death from heart disease. See http://radicalart.info/nothing/music/silence/index.html.

[576] Interestingly, the cover of the exhibition brochure for "For Eyes & Ears" does not have a sound-producing object, but instead, a etched rendering of the anguished face of Laocoön from the famed Hellenistic sculpture group by Athenodoros, Hagedoros, and Polysandros. Though the topic is outside the scope of this dissertation, the appearance of this figure on this brochure at this moment, along with Calas's essay reference to the aesthetics of the "post-Laocoön era" references the ongoing arguments for medium specificity espoused by Clement Greenberg in his 1940 essay "Toward a Newer Laocoön," which takes its title from two earlier books disseminating the boundaries among the arts: Gotthold Lessing's *Laocoön: An Essay on the Limits of Painting and Poetry* (1766) and Irving Babbitt's *The New Laokoon: An Essay on the Confusion of the Arts* (1910).

the existence of a phylogenic past in which differences between what was seen and what was heard were less precise than they are today."[577]

In fact, synesthesia seems to have been the prominent theme in the exhibition, which also attempted to provide a historical discourse on synesthesia by including works spanning five decades. The exhibition included several collaborations, such as Paul Brach's and Morton Feldman's *Reactor* and Robert Rauschenberg's and Billy Klüver's *Dry Cell*, a 1963 sculpture that served as a receiver of sounds which the sculpture then amplified (Figure 4.22). Most notably, the exhibition included the Duchamp readymade titled *With Hidden Noise*, originally of 1916 (Figure 4.23). This work also represents a collaborative effort, since Duchamp had asked his patron Walter Arensberg to place a secret object inside the ball of twine and between two clamped metal plates, forcing the viewer to wonder what makes the sounds inside.[578] One would also see a variety of media including the installation *Music Set* by Joe Jones, Tinguely's kinetic *Radio Drawing*, and the Jasper Johns encaustic on board painting *Tango,* which came with a small music box. Other works included musical sculptures by Man Ray, Chryssa, Alfonso Ossorio, Ruth Volmer, Bruce Connor, George Brecht, Robert Watts, Robert Morris, Walter de Maria, and a Calder sculpture titled *Three Gongs and Red*.[579]

The inclusion of Parisian kinetic works is significant considering how many members of American avant-garde are presented. It also makes sense politically. The gallerists Daniel Cordier and Arne Ekstrom were both Europeans and, along with the

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[577] Nicolas Calas, *For Eyes & Ears* (New York: Cordier & Ekstrom Gallery, 1964), n.p. The gallerists gave Duchamp a retrospective in January 1965 and were the publishers of his deluxe note collection *Á l'infinitif (The White Box)*, which appeared in early 1967.
[578] Francis N. Naumann, *Marcel Duchamp: The Art of Making Art in an Age of Mechanical Reproduction* (New York: Harry N. Abrams, 1999), 67-68.
[579] Calas, *For Eyes & Ears*, n.p.

New York gallery, Cordier also managed a Parisian gallery and showed kinetic works by European artists.[580] These dealers witnessed the musical activities of the Fluxus groups in New York (including Watts and Brecht) and in Europe and may have seen the exhibition "For Eyes & Ears" as a useful bridge between the New York and Paris scenes. Furthermore, including works by earlier modern artists, such as Duchamp and transplated American Man Ray, gives solid footing to the idea of European precedence for this new activity.

Music unites this grouping, likely due to the efforts of Arne Ekstrom. A long-time music lover and partner to Permenia Migel, scholar of Igor Stravinsky and Serge Diaghilev, Ekstrom frequently staged small exhibitions of music-related artworks in the gallery.[581] The recruitment of Calas as co-organizer and the absence of live musical performance or performance art, seen so regularly in Fluxus activities at the time, helped bridge European involvement with the increasingly American arena of visual music. Lastly, the presence of the sculpture *Sound of Void,* which combined the kinetic techniques of a Parisian trendsetter with the reputation and finesse of a respected American composer, created a perceptual synthesis of these two worlds.

Takis's Varieties of *Sculptures Musicales*

Using the construct of amplification and object receivers, Takis experimented with sound sculptures in his efforts to "give" the innate light and music of the cosmos, emulating his hero, Apollo, as much as possible. By 1965, Takis began engineering

[580] Cordier came from France and Ekstrom from Sweden.
[581] John Russell, "Arne Ekstrom, 87, Director of a Prominent Art Gallery (Obituary)," *The New York Times*, May 19, 1996, sec. 12, 35.

various pieces that he called *Musical Sculptures*, *Telemagnetic Musical Sculptures*, and *Musical Light Sculptures*, all of which fall under the umbrella term of *Musicales*. The simplest *Musical Sculptures* consist of magnets and needles suspended by piano wires and attached to a cork or wooden backboard (Figure 4.24). An electromagnet fixed to the backboard runs with various currents, attracting the magnets and needles. When in motion, the hanging wires and needles strike a horizontal piano wire. A tiny microphone attached to the piano wire sends the sound signals through first a noise filter and then a loudspeaker. A diagram and detail help illustrate this mechanism, which is very similar to a single coil pickup on an electric guitar (Figures 4.25 and 4.26). In contrast to the *Musical Sculptures*, the *Telemagnetic Musical Sculptures* employ the same backing structure, horizontal piano or guitar wire, and electromagnetic device, but do not use needles to make a struck sound (Figure 4.27). Instead, Takis suspends objects with different masses, often round cork fishing bobs and folded metal cones like those shown in his *Système de Radar Magnétique* (Figure 4.16), through which he inserts needles to magnetize the floating objects, which hang just past the horizontal wire. The electromagnet attracts the vertically hanging objects to the horizontal wire, creating percussive music. The *Musical Light Sculptures*, much like the *White Signals*, function as *Musical Sculptures* with the difference that the production of music triggers the firing of a light bulb, often with a loud accompanying click (Figure 4.28). The *Musical Light Sculptures*, therefore, create a more enhanced sensorial experience via the addition of synchronized lights.

Takis describes his role as composer of the *Musicales* by stating,

> My "musicals" are not composed. Even if I plan out a lot of factors in advance while constructing a piece, I always leave room for chance. My role in the

> acoustic end product lies essentially in the choice of string, its length, and the degree of magnetic force used to strike the string. Once you set the instrument in motion, the instrument itself becomes its own agent, and acts of its own accord. This is therefore a "virtual" musical composition.[582]

This interest in spontaneity and virtual musical composition seems to arise from an understanding of the tenets of Earle Brown's open form composition. Brown's notion that there is not a fixed relationship among composer, score, and performer has an analog in the way that Takis conceives of his relationship to his musical sculptures as performers of the scores that he engineers not on paper, but with strings, magnets, and needles. Takis inverts the relationship of composer to musician to instrument to listener by making the musician and instrument the same autonomous machine. And again, the notion of the bioelectromagnetic observer effect becomes more likely with decreased distance between sculpture and viewer, creating a feedback system between what Ashby called "coupled machines," or two machines working in tandem.[583]

One might logically ask who comprised Takis's audience. As noted earlier, Takis, a poet, spent much of his time with the Beat poets Ginsberg, Burroughs, and Corso, as well as Beiles and Gysin. This group of poets, denizens of the Beat hotel the Rue Gît-le-Coeur, appealed to Takis for their radical political sensibilities and interests beyond the borders of France.[584] Takis provides an important point of reference regarding the Beat poets' interest in Zen Buddhism, music, and their activity in Europe in the 1960s. Even by 1961, he began to feel that the Gît-le-Coeur scene of international poets suited him

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[582] Bosseur and Broniarski, *Sound and the Visual Arts: Intersections between Music and Plastic Arts Today*, 85.
[583] W. Ross Ashby, *An Introduction to Cybernetics* (New York: John Wiley and Sons, Inc., 1956), 48. The goal for any coupled machine is that the coupling can occur without harm to the individual machines' inner mechanisms.
[584] Takis, "Estafilades," *Takis: Retrospective*, 66.

socially far more than the bickering cadre of artists associated with Iris Clert. For Takis, Ginsberg and Burroughs were nothing short of "prophets."[585]

Most of the literary references to Takis pertain to his use of magnets and invisible forces of the cosmos. Takis clearly envisioned himself as a shamanistic engineer who could bring the cosmos down to earth via technological means. The Beat poets in his circle, including Ginsberg, Corso, and Burroughs, wrote poetry about his sculpture that demonstrates the extent to which Takis's sculpture captured the imaginations of his audience. As the epigraph for this chapter, Burroughs' 1962 poem, written before the advent of the *Musicales*, indicates the sonic possibilities of metal and magnets. For Burroughs, the sculpture resonates as audibly "thinking" metal. In an April 1962 poem written from Bombay, Ginsberg praised Takis's use of magnets in investigating the music of the spheres, writing:

> The only vision I ever had of magneticism was during a conversation with Takis in Paris in his studio, looking at his little metal cones hummingly waveringly pulled by like wires straight at their little magnet fathers; and he, Takis, explained to me that the stars were all pulled together with myriad thin invisible wires of magneticism radiating from every star to every other star – so we imagined, if you pulled out any one star the whole thrumming mechanism would slip a cosmic inch like a quavering mobile and all twang together into place at once on lines of unseen magnetic tracks, *thunk.*[586]

Ginsberg, like Renaissance cosmographers Robert Fludd and Athanasius Kircher, imagined the universe as a vibrating instrument, and a noisy one at that. Further, his reference to the "quavering mobile" puts Takis in the same sculptural lineage as Calder, another nod to the international appeal of Takis's magnetic works. Contemporary responses to Takis's *Musicales* largely indicates that his audience, including the Zen

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[585] *Ibid.*, 67. For a background on the Beats, see Barry Miles, *Ginsberg: A Biography* (New York: Simon and Schuster, 1989).
[586] Calas and Calas, *Takis: Monographies*, 124.

practicing Beat poets, responded to his work from a standpoint of elevated consciousness through sound. In a direct response to Takis's 1966 sculpture *Purple Dial (The Purple Subway Ride)* (Figure 4.29), for example, Corso penned the following lines:

> Electricities whisper a locomotive beauty
> Into the terminal the magnet-conductor switches off
> And folds the diesel
> De-magnetized the compasses' magic pin softly screams
> Like a wire plucked from a violin
> Twenty Takis' are twenty one dreams.[587]

[587] Gregory Corso, "Purple Subway Ride," 1967, in *Takis*, ed. Maurice Eschapasse and Blaise Gautier, vol. 6, *CNACarchives Nouvelle Serie* (Paris: Centre National d'Art Contemporain, 1972), 6: 50.

Conclusion

In his epic science fiction film *2001: A Space Odyssey*, released in 1968, director Stanley Kubrick integrated both classical and new music into the soundtrack. Given the paucity of dialogue in a film of two-and-a-half hours in length, the music takes on an integral role in imparting the moods of different scenes. The film begins with a prologue: a black screen with the sounds of most of György Ligeti's *Atmosphères* (1961), a densely textured serial work for full orchestra. The film then transitions to the first scene, "The Dawn of Man," which used Richard Strauss's so-called "tone poem," *Also sprach Zarathustra* (*Thus Spake Zarathustra*), 1896. The second section then begins with another nineteenth-century work, Johann Strauss's waltz *An der schönen blauen Donau* (*The Blue Danube*), of 1866, providing a musical background for the dance of man-made satellites and space stations around the earth.

At the beginning, in the middle, and at the end of the film, Kubrick uses the visual motif of a monumental black rectangular solid as a mysterious object that confounds those who find it. The presence of this monolith, perhaps signifying an extraterrestrial intelligence, primordial cosmic awareness, or god, is accompanied in the first two instances of its appearance by another work by Ligeti, a vocal piece with electronic manipulations called *Requiem* (1963-1965). The contrast with Kubrick's use of *The Blue Danube,* for example, is striking. Kubrick mitigates the noise, repetition, and overtones of Ligeti's *Requiem*, however, in weaving silence into the scenes that include the work, often segueing abruptly from the dense vocal fabric of the haunting *Requiem* to silences that, at first, seem deafening. To quote Terry Riley on La Monte Young's *Poem*, the work first referenced in the introduction to this dissertation, the ensuing silence becomes

charged. Perhaps most striking, however, is that Kubrick chose to pair this particular work by Ligeti with scenes of the monolith. This pairing underscores not only the notion that visual abstraction (the black rectangle) ties most fittingly with abstract concepts of spirituality (higher intelligence), but also that, in the late 1960s, avant-garde electronic music seemed the most appropriate sonic pairing or musical vehicle for visual abstraction. This dissertation, whose historical period ends roughly at the same time that Kubrick released *2001: A Space Odyssey*, likewise connects modes of visual abstraction in performance, painting, and sculpture, and new music theories.

Over the course of the four case studies of this dissertation, featuring the work of two composers, two painters, and two sculptors, several overarching threads of context intersect. These include an emphasis on the audience's role in the perception or reception of the works, varying uses of time and duration, differing interests in concepts of space, investigations into higher states of consciousness, and a fostering of artistic community (real and imagined). In focusing on these cultural threads connecting the artists and composers, this dissertation presents a new reading of this historical moment—one steeped in interactions between artists, composers, and musicians.

Similarly to Kubrick's *2001: A Space Odyssey*, a film that one might categorize as sound art, the works of art discussed in this dissertation place multiple demands on their audiences: temporal, intellectual, retinal, aural, and even psychological. In this way, one might characterize all of the works discussed as aggressive in their approach to a viewer; their usefulness as objects of study depends on the audience reaction. For Young, his disillusionment with academic composition programs led him to create improvisational text scores that confront the audience, either in expectation or with high volume. He

made his audience consider not only the originating score, but also how the performers chose to enact those scores visually over time. With his use of long tones, putting the listener into a "drone state of mind," Young attempts to force a higher state of consciousness on his audience. In 1966, having experimented with the Theatre of Eternal Music for three years, Young explained his goal in performance as follows:

> The tradition of modal music has always been concerned with the repetition of limited groups of specific frequencies called modes throughout a single work and . . . the assignation of a particular mood or psychological state to each of the modes. . . . When these frequencies are continuous, as in my music, we can conceive even more easily how, if part of our circuitry is performing the same operation continuously, this could be considered to be or to simulate a psychological state. My own feeling has always been that if people just aren't carried away to heaven I'm failing.[588]

Poons and Valledor similarly place psychological demands upon a viewer by requiring heightened retinal activity. Looking at their paintings is like listening to a symphony in that one must concentrate for a long period. It is difficult to decipher their content without the temporal demand. With Poons's dot paintings, the act of reading the works must take place over an extended period of time. Like a page of a score or a text of a poem, the system of the dots cannot be fully understood without the extended act of looking. To attempt to read the paintings with a cursory look would be like substituting a five-second clip of music for the entire song. One might get a hint of the melody or rhythm, but the parts of the musical system would not coalesce. More importantly, because of Poons's use of color combinations, the after-images would not appear without the challenge to the eye's retina, creating a heightened perceptual effect of viewing. In this way, one might think of the after-images burned into the mind's eye as the memory of a song (or part of a song) that a listener cannot get out of his or her head.

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[588] Kostelanetz, *The Theatre of Mixed Means*, 217-218.

For Valledor, the sheer scale of the zig-zag paintings demands extended viewing, although, paradoxically, the geometric shapes in the canvases may force quick movement of the eye. The canvases' stretching into the peripheral vision of a viewer causes a retinal fatigue in that the eye wants to adjust to a focal point, but cannot. The sharp diagonal lines, however, do not always allow for a slow reading of the works. Instead, they sometimes create a retinal velocity, forcing the eye to bounce from end to end. Valledor's dots, then, contribute to the temporal confusion by enhancing the strong spatial illusions that make the two-dimensional paintings appear to waver between two and three dimensions, further pushing the viewer for a deeper reading. In this way, Poons's and Valledor's dots have very different effects on the viewer: Poons's dots, in contrast to Valledor's, demand a long viewing time simply in order to read the paintings and to experience the after-images formed by the complementary colors. In the case where the painters have used single dots—in Poons's *Euthalia* and in Valledor's *Becoming* and *Earth Sign*—the dots seem linked conceptually as single motifs. However, where Valledor's dots function as possible focal points in the paintings, and, especially where the blue dot of *Becoming* undulates in and out of focus against its dark background, the off-center lavender dot of Poons's *Euthalia* shifts the eye away from the center of the canvas, as if in motion.

Stockhausen's serial and electronic music similarly asks much of the audience. His works are not "beautiful" in a conventional (tonal) sense; rather, they compel a difficult listening situation. Serial music does not place any emphasis on a question/answer song format or an A-B-A progression, where the end repeats a musical motif from the beginning. Because the twelve tones of a given tone row may be used in

any combination desired by the composer, these works create discomfort for a listener who wants to know where the music is going. Instead of allowing the listener of his serial music to intuit where the music is going, as one would with tonal music, Stockhausen instead asks the listener to trust him that the music will do *something* even though the outcome may be unexpected. With electronic music, such as *Gesang der Jünglinge*, the listener must process the noises and silences incorporated. One cannot count on knowing where the music is going. An audience can only depend on the fact that it will have to end at some point, an assurance easily tested by the hours-long improvised performances of works by Stockhausen and Young.

In the case of Stockhausen, one might consider the problem of an electronic music concert in relation to human activity. No two performances of any musical score will ever be exactly the same, but with electronic music, the distance in similarity between two concerts becomes much narrower. The work may be conceived on paper, worked and recorded in a studio, and played back over loudspeakers; in this case, the placement of the audience and the loudspeakers within the performance architecture would account for differences in performances. Are these kinds of concerts, then, a sound art enacted by the sculpture of loudspeakers and the architecture of a sonic space?

Rather than placing a psychological demand on his audience, LeWitt requires more of an intellectual practice of looking at his work, but this can sometimes cause doubt. Upon first glance, one might see the geometry of a structure like *Serial Project #1: ABCD* and intuit by the geometry of the grid and modules that a system is in place. However, to fully comprehend the system, a viewer must actually read these works similarly to the way that one would read a Poons or Valledor work, module by module,

asking oneself to remember the logic of each prior module. A viewer might ask where are there open spaces and where are there empty spaces? Does the system repeat? How can one be sure? The modular works, by hinting at sometimes unanswerable questions, can thus create some intellectual anxiety for the viewer, who trusts that LeWitt has used a system. The problem lies in his use of seriality, which does not require a regularized or recognizable system. Likewise, with LeWitt's wall drawings, a viewer wants to trust that a correlation exists between the text instructions and the subsequent drawing. When the logic becomes faulty or opaque, however, the combination of text and drawing tests a viewer's sense of a causal relationship between the two. Like every serial work, they are self-contained entities whose inner correspondences may seem illogical to its audience.

In the case of Takis, his sculpture creates aural, psychological, and temporal demands for his audience, in addition to the physical strain of looking at some of the *Signals*, as discussed in chapter four. The aural demands play out differently for the *Signals* and *Musicales*. With the *Signals*, one wants to hear their music. Because of this desire, a viewer will strain to listen through silence, creating a psychological state that composer Pauline Oliveros, a classmate of Young's at Berkeley, has termed "deep listening."[589] In this instance, silence again becomes charged. With the *Musicales*, however, Takis amplifies the sound, taking out the guesswork. As with the work of Young and Stockhausen, however, the duration of the music cannot be known. It depends on the magnetic waves produced by the electromagnets, the gauges of the wires used, the mass of the tethered objects, and other factors unique to each work. Takis referred to these works as "virtual" compositions whose agency comes from his initial planning of

[589] Pauline Oliveros, *Deep Listening: A Composer's Sound Practice* (New York: iUniverse, Inc., 2005).

the elements. All one can do to stop the music of the spheres presented by these works, then, is unplug the magnet.

Young and Stockhausen, as the two trained composers addressed in this dissertation, fully engage the performers of their improvised works, creating for those men and women the most experimental and privileged place of experience. The performers are privy to the scores, to the methods of the composers, and have the agency to work with them in settings with varied levels of improvisation required. Audience becomes secondary, although a necessary and important component of the performances. The audiences do not necessarily have to trust the composer, but they must trust the decisions of the performers. A similar discourse happens around LeWitt's wall drawings. The execution depends on the improvised actions of those interpreting and then drawing LeWitt's lines. As with contemporary composition, the translation of ideas from score to performance requires a transition from one medium to another; the performer must enact the score's directions in another medium. In Takis's *Musicales*, the artist sets up the governing factors, but the machines act as musicians/performers.

With Takis, one might initially assume that, because the *Signals* and *Musicales* deal in the realm of harnessed sound, they are sound art sculptures. This is more straightforward with the *Musicales*, but the *Signals* problematize their own designation. Because, in reality, the *Signals* do not function fully as the artist intended—as receivers and projectors of sonic waves—they are, in effect, nearly *silent* sonic works. In their case, Kim-Cohen's term "non-cochlear sonic art" seems quite apt. The *Signals* resonate as sonic, even if unheard. Once Takis introduced electromagnets, the waves of which cause the interplanetary music of the spheres, into the *Musicales*, the works become much more

like heard representations of an imagined "starry dynamo in the machinery of night," to use a term of Ginsberg's from *Howl*.[590] In this way, Takis's sculptures have a conceptual analog to Stockhausen's electronic music: they are both truly experimental and failure is a possibility.

Time is a necessary element of any musical or sound performance, but it is also critical for the reading of Poons's, Valledor's, and LeWitt's work from this period. In works by LeWitt and Poons, an overarching system governs the aesthetic design and formal choices. It takes time and careful reading to apprehend this system. For Valledor, the system is less fixed and more intuitive, based, as it is, on the artist's relational color theories. While the temporal "reading" of a LeWitt or a Poons may reveal the system used in an intellectual or quasi-logical fashion, the viewer of a Valledor sees the simple zig-zag design, but intuits and internalizes the spatial push and pull of the color, scale, and dot placement in his works.

The artists in this dissertation all express interests in space, whether two-dimensional, three-dimensional, four-dimensional, concert spaces, sonic spaces, or outer space. In the work of Poons and Valledor, the picture planes toggle between two, three, and, in the case of Valledor, four dimensions. Poons's dot paintings have the flat background color fields that reinforce their two-dimensionality, but the optical illusions of the vibration of the dots and the after-images they produce may make the images appear to veer into three dimensions for some viewers. However, the effect of three-dimensionality is much stronger in Valledor's dot and zig-zag paintings, where his color juxtapositions create a more forceful illusion of three-dimensionality. Further, the optical

[590] Ginsberg, *Howl and Other Poems*, 9.

movement suggested by his use of what he termed "four dimensional color" made their kineticism an extra dimension of space. Like the other painters at the Park Place Gallery, Valledor had a deep interest in space and renewed ideas of a spatial fourth dimension, and he used color, dots, and spatial illusion to attempt to get closer to this phenomenon through the format of painting. In this way, his two-dimensional paintings approximate the paradoxes of multi-dimensional space.[591]

LeWitt's work necessarily emphasized space: while his drawings worked on two-dimensional surfaces, the structures played with perception of three-dimensionality. As deductive structures, a term used to describe the 1960s paintings of Frank Stella, LeWitt's structures came out of systems that could be deduced by a viewer considering the sum of the parts as a whole unit or a Gestalt, very similarly to the way that Stockhausen conceived of each of his compositions as self-contained units.[592] The seriality lies within each structure and not necessarily between them. Moreover, LeWitt further emphasized the two- or three-dimensionality of his works by eliminating the use of vitrines, frames, and pedestals. By being made directly on the wall, they become part of the two-dimensional surface. By contrast, the structures placed directly on the floor claim not only the horizontal space of the floor, but also the column of vertical space above them. In this way, the structures fully assert themselves as three-dimensional objects that do not reference anything outside of themselves and that exist in a column of space in a given gallery.

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[591] For in-depth discussions of spatial complexity at Park Place and throughout the twentieth century, see Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York* and Henderson, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*, revised ed.

[592] Robert Morris, "Notes on Sculpture," *Artforum* 4 (February 1966): 42-44.

Takis worked in modes that have some similarity to LeWitt's use of three-dimensional space. Coming from a European artistic lineage, however, Takis was interested in space as an element of contemporary discussions on kinetic art and space-time, as well as outer space.[593] The large *Signals*, like LeWitt's structures, sit directly on the floor, intruding into the gallery space by occupying the negative space around them. Unlike LeWitt, Takis required the use of pedestals for the smaller *Signals*, although he avoided direct confrontation with a viewer by asking that the *Signals* sit on pedestals above eye level. Like Valledor's horizontal zig-zags, the small *Signals*, then, begin to occupy the peripheries of a viewer's vision, but vertically rather than horizontally. Unlike LeWitt's structures, however, the *Signals* are not Gestalts; rather, they consist of separate parts that may or may not work together.

The *Musicales* play with wall space differently than a painting or a LeWitt wall drawing. As installations fixed to a backboard, they depend on the support of a wall and hang like a painting. However, they assert themselves not only into three-dimensional space with their kinetic parts, but their function as musical machines brings about another kind of space: a sonic sphere whose depth can vary based on the volume selected for the loudspeakers attached. In this way, the sound produced by a *Musicale* can telescope into an indeterminate area of space. Further, by channeling the music of the spheres through metal and magnets, the *Signals* and *Musicales* reference the space of the cosmos or universe outside of the gallery walls, reinforcing their lack of containment. In particular, the *Musicales* interact with one another when exhibited together by crossing invisible sonic spaces. This is yet another contrast to LeWitt's structures, which have much more

[593] Henderson, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*, revised ed., 36-37.

limited boundaries within their given exhibition space and a specific autonomy from one another. Takis's interests in the "space race" and space travel, then, informed his desire to expand the sonic boundaries of the *Signals* and *Musicales*.

As composers, Stockhausen and Young worked with sonic spaces as well. Like Valledor, whose *Quintessence (to Edgar Varèse)* uses color contrast to create a spatial effect similar to the spatialization of sound that Varèse sought himself, Stockhausen used Varèse's theories of space, but in a more direct manner through the use of the same medium of music. Stockhausen's desire to create spatial planes of sound, evidenced in works such as *Zeitmasse*, drew upon his interest in Varèse's notions of sonic spaces in *Hyperprism* and *Déserts*. Likewise, the West German pavilion at Osaka in 1970 featured Stockhausen's ideal concert space with lights and speakers in a dome-like space that enveloped the audience in sound. By creating this sonic sphere, Stockhausen emulated elements of space explored by Varèse with the 425 loudspeakers projecting *Poème Electronique* throughout the Philips Pavilion in 1958.

Stockhausen's creation of spatial electronic music composed of "sound atoms" contrasts to Young's creation of total sonic environments. Rather than using the discrete sonic clusters that Stockhausen created electronically, Young used sustained tones to create a seemingly constant (very slowly evolving) all-embracing space of sound. He also used extreme amplification techniques, whether in concert or with sine wave generators in the Dream Houses, to intensify the sensation of sonic thickness and layering in space. Like Valledor, Young was interested in Ouspensky's equation of cosmic consciousness and spatial four-dimensionality, intertwining the concepts to create sonic environments

that provoked the spiritual "drone space" that might foster a state of expanded consciousness.

Young was not alone in his connecting physical space with the space of enlarged consciousness. For almost all of the artists in this dissertation, an exploration of space was linked to notions of the cosmos, Eastern metaphysical philosophy, and enhanced consciousness. In other words, a deeper understanding of space correlated to modes of enlightenment. Poons and LeWitt did not necessarily engage personally with Asian metaphysical practices, such as Zen meditation, but both were well-informed of it. Poons studied Zen and the poetry of Han-Shan through his association with Cage's circle, who used the writings of D.T. Suzuki as their guide. LeWitt, like many artists of his generation, experienced Asian culture personally as a member of the United States Armed Forces. Stationed in Japan during the Korean War in the 1950s, LeWitt used his leave time to visit Zen temples and study Asian architecture.[594] In this way, both Poons and LeWitt had community-based interactions with Asian philosophy rather than personal practices.

For Young, an early interest in space developed during his childhood in Idaho, as he listened to the wind and the humming of the electrical transformers, and concepts of eternity in Mormonism. As a student in California, he learned of the Vedantas and Zen in the context of his study of Asian music, recordings of which had just begun to make their way to the United States. These concepts then melded together in Young's compositional theories, combining drone and improvisation. Stockhausen also came to his studies of Asian philosophy by way of a devout Christian upbringing. Stockhausen's early works,

[594] Legg, *Sol LeWitt*, 12.

such as *Kreuzspiel*, incorporated notions from his Catholicism, but after reading Hesse's *The Glass Bead Game*, the spirituality presented in his composition increasingly aligned more with Zen and ideas of finding a divine unity through his work. Like Young, Stockhausen embraced improvisation as a spiritual enterprise with the intuitive composition of *Aus den sieben Tagen.*

Takis and Valledor were practitioners of Zen more exclusively and less focused on amalgamating Asian philosophy more inclusively the way that Young and Stockhausen pursued various philosophies. Takis came to Zen in the context of a postwar emigration to Paris, where he studied Zen under the Parisian master Robert Godin, who also taught Yves Klein. Takis's desire to reify the music of the spheres thus came out of his studies of Zen's conception of the emptiness of space. Valledor was a lifelong practitioner of Zen, and, like Young, came out of an artistic community focused on Zen practice in the San Francisco Bay Area. His ideas of color harmonies were grounded in his own Zen practices. For example, Valledor's understanding of Zen paradox helped inform his use of color to create spatial illusions that toggled between two and four dimensions of space.

Ultimately, this dissertation focuses on ways that musical and artistic communities exchanged ideas and theories of sound. Communities, both real and conceptual, helped create intellectual ties among these artists. As composers and visual artists interested in early forms of intermedia, they also engaged with literature circulating in their communities, especially poetry. LeWitt used the ideas of poetic space espoused in Mallarmé's *Le Livre* as sources for his serial structures. He also wrote his own kind of poetry in the texts of the wall drawings, a kind of event score similar to

Young's *Compositions 1960*. Young himself read Zen poetry and the *Tao Te Ching*, but was also part of a scene of "post-Beat" poets in New York, including Diane Wakoski, whose poetry served as a source for Young's *Lecture 1960*. Beat poetry became a strong conceptual thread among Poons, Valledor, and Takis. As a co-owner of the Epitome Coffee Shop, Poons hosted Beat poetry readings and was part of a community of poets that included Allen Ginsberg and Jack Kerouac. In reading the Han-Shan poems, translated by the California Beat poet Gary Snyder, Poons has a secondary cultural tie to the Beats. Valledor, like Ginsberg and Kerouac, was part of poetry scenes in both the Bay Area and New York. As a painter exhibiting at the Six Gallery, Valledor had direct exposure to readings by Ginsberg. Through his close friend and classmate at the California School of Fine Arts, Dean Fleming, who knew philosopher Alan Watts personally, Valledor had further community-based connections to Beat poetry.[595] Further, given the intermedial ethos of the Park Place Gallery, which embraced poetry, music, sculpture, painting, and performance simultaneously, Valledor had direct access to poets and composers in New York. Finally, Takis interacted personally with Ginsberg and William Burroughs in Paris; he, Sinclair Beiles, Brion Gysin, and others congregated at the Parisian Hotel Gît-le-Coeur to discuss poetry and politics. For Takis, this community offered a welcomed respite from Iris Clert's stable of competitive artists.

Personal ties among these artists also existed. Young studied under Stockhausen at Darmstadt and was a neighbor to and a musical collaborator with Poons. As a painter, Poons was invited to exhibit at the Park Place Gallery, where Valledor had been a

[595] Henderson, *Reimagining Space: The Park Place Gallery Group in 1960s New York*, 15. Fleming had later gotten to know Snyder personally as well. See Dean Fleming, *Dean Fleming: Selected Paintings 1957-2013* (Hollis, NH: Puritan Capital, 2014), 9.

founding member. In 1967 Valledor invited LeWitt and Smithson to exhibit with him at Park Place, further cementing its role as a hub for contemporary painting and sculpture in its experimental pairings. LeWitt, in turn, read *Die Reihe*, a journal edited by Stockhausen, reinforcing the international ties among American art and European avant-garde music. Finally, Takis collaborated with Earle Brown, a frequent lecturer at Darmstadt and a fixture of improvisational composition, in the creation of his first *Musicale*, yet another trans-Atlantic interaction.

In exploring the roles of sound and music in the work of each of these artists and related composers, this study offers new insights into the period of the late fifties to late sixties and, at the same time, subverts the dominant narrative of the New York art world in this period. Moving beyond the formalist critical writing of figures like Clement Greenberg, Donald Judd, and Michael Fried, which emphasized objecthood of works rather than their cultural positions, this dissertation presents a new view of the period by focusing on the interdisciplinarity of the artists in question, along with the connecting threads that are largely absent from art writing from the period. The abstract objects presented in this dissertation do not mimic or imitate music; instead, their makers responded to concepts from new music to push art making in unprecedented directions, testing the very boundaries of objecthood. By focusing on artistic communities and the ways that musical ideas circulated through these communities, this dissertation opens the field of inquiry into the ways that artists working in multiple media could interact physically, spiritually, and conceptually, with sonic inspiration.

Illustrations

Figure 0.1. Manfred Leve, photo of Nam June Paik and David Tudor performing La Monte Young's *Poem* . . . , Cologne, 1960.

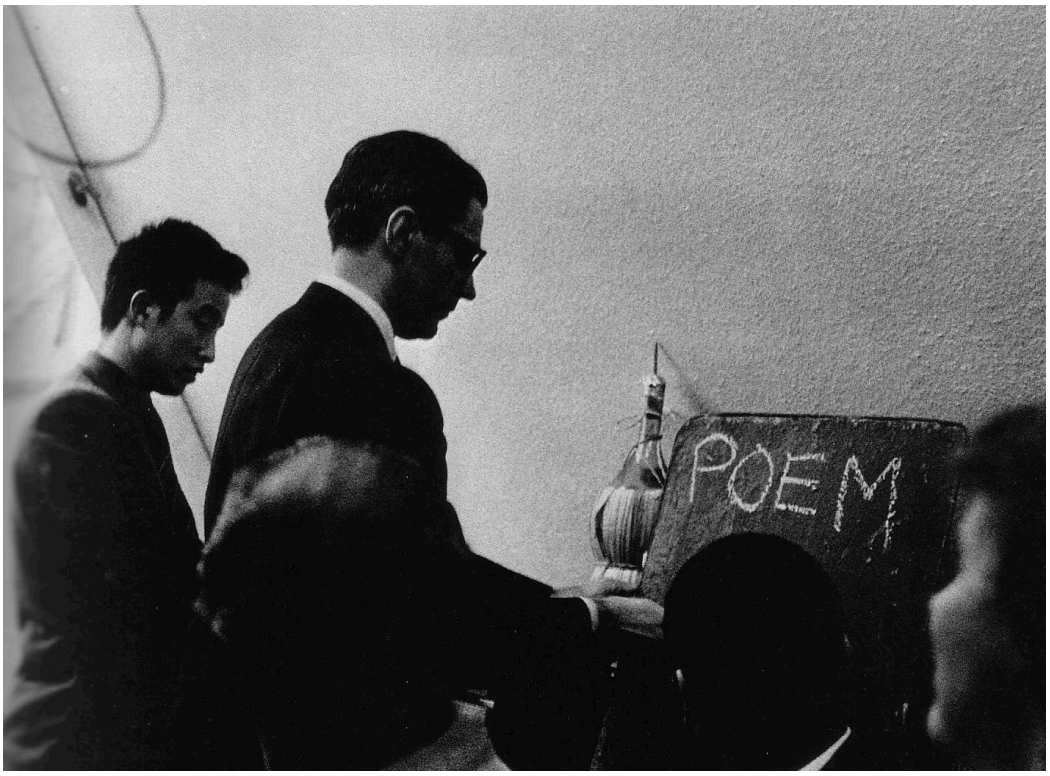


Figure 1.1. La Monte Young, *Composition 1960 #10 to Bob Morris*, 1960

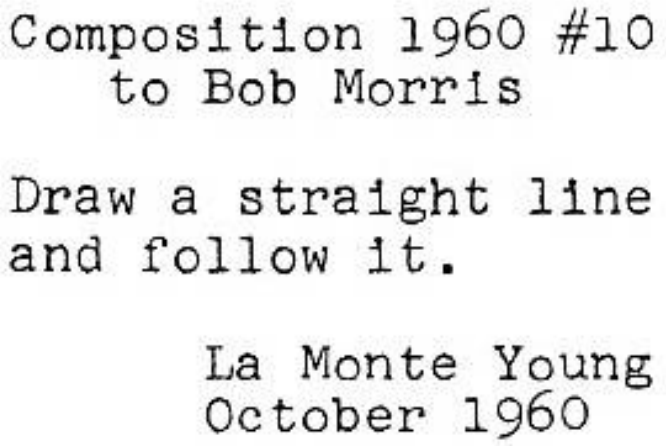


Figure 1.2. The Theatre of Eternal Music at the Four Heavens, February 6, 1966

Figure 1.3. A prepared piano by John Cage, after 1938

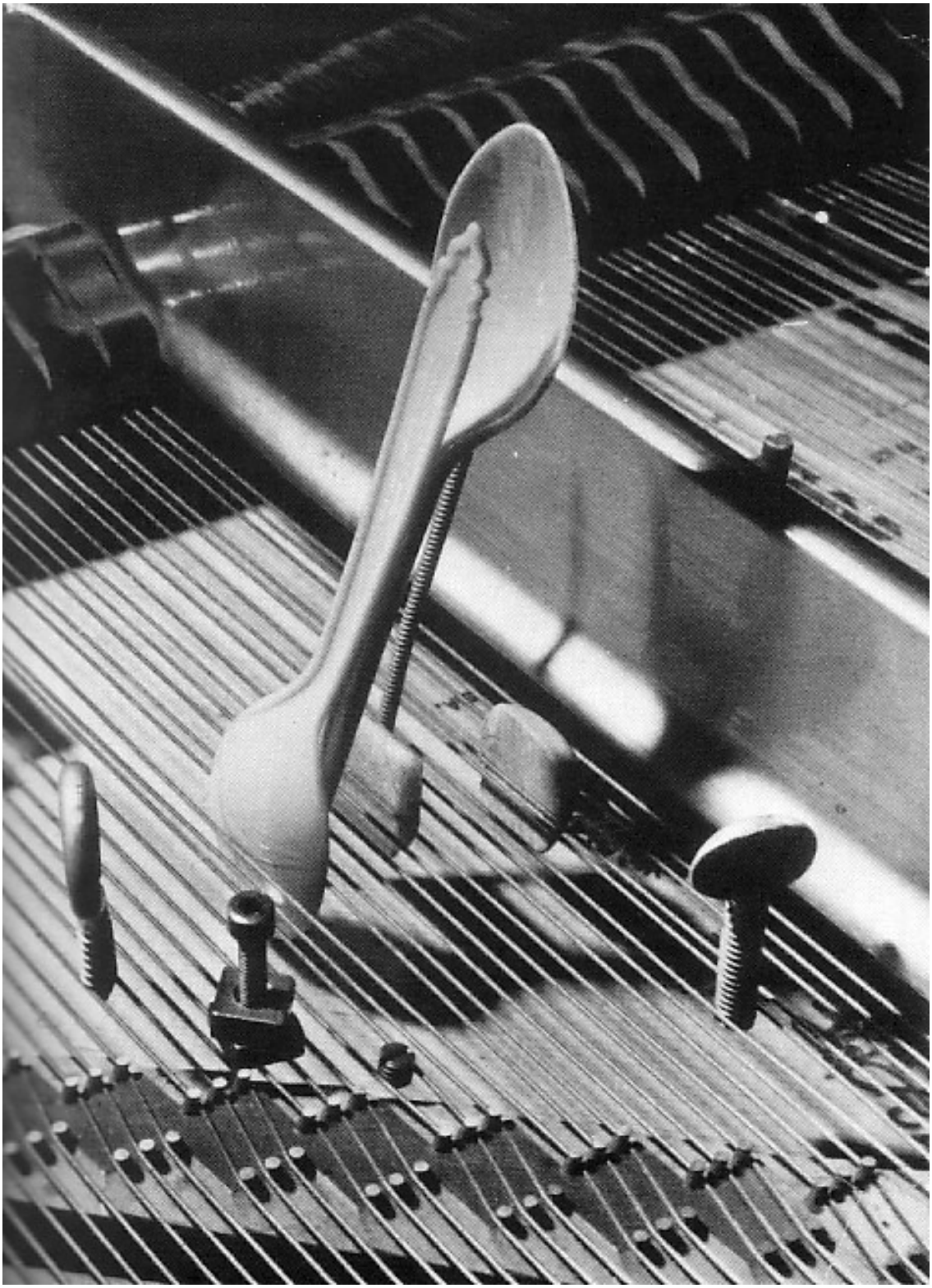


Figure 1.4. Nam June Paik, *Klavier Integral*, 1958-1963

Figure 1.5. Joseph Beuys at the *Exposition of Music—Electronic Television*, Galerie Parnass, Wuppertal, Germany, 1963

Figure 1.6. La Monte Young, score for *For Brass*, 1957

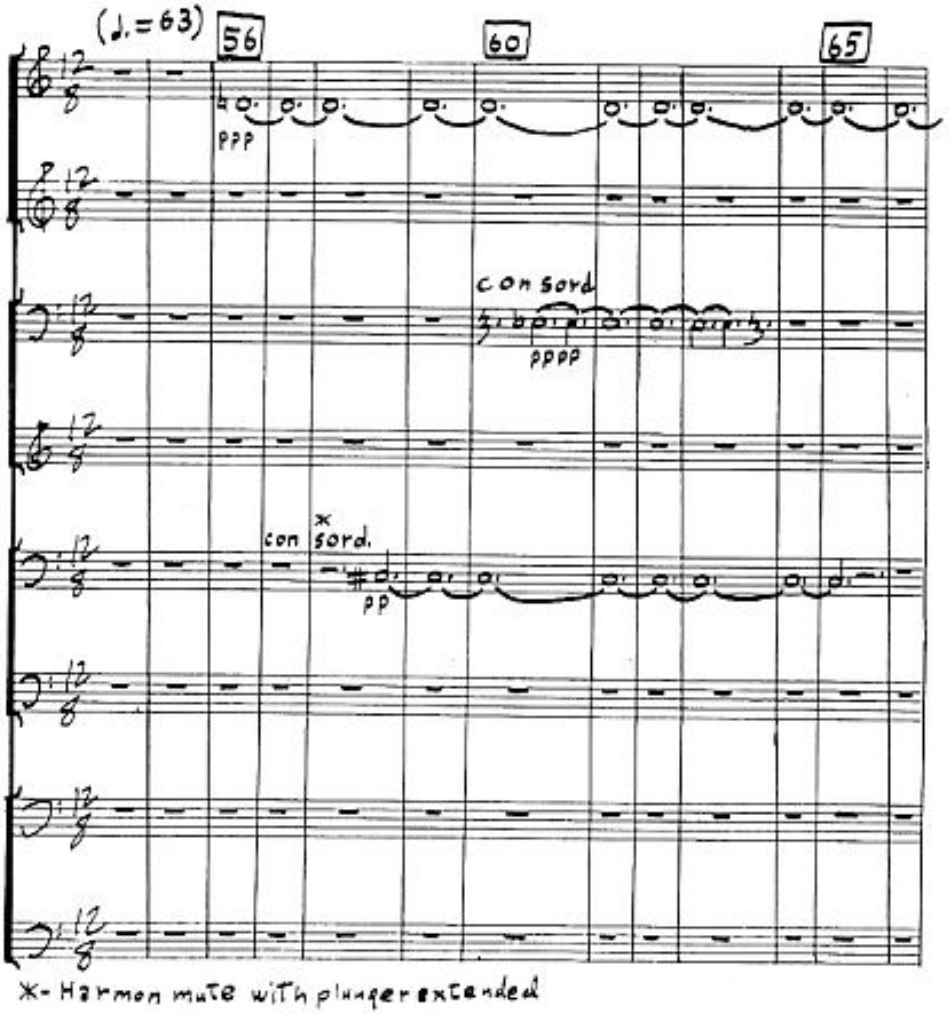


Figure 1.7. La Monte Young, page of score for *Trio for Strings*, 1958

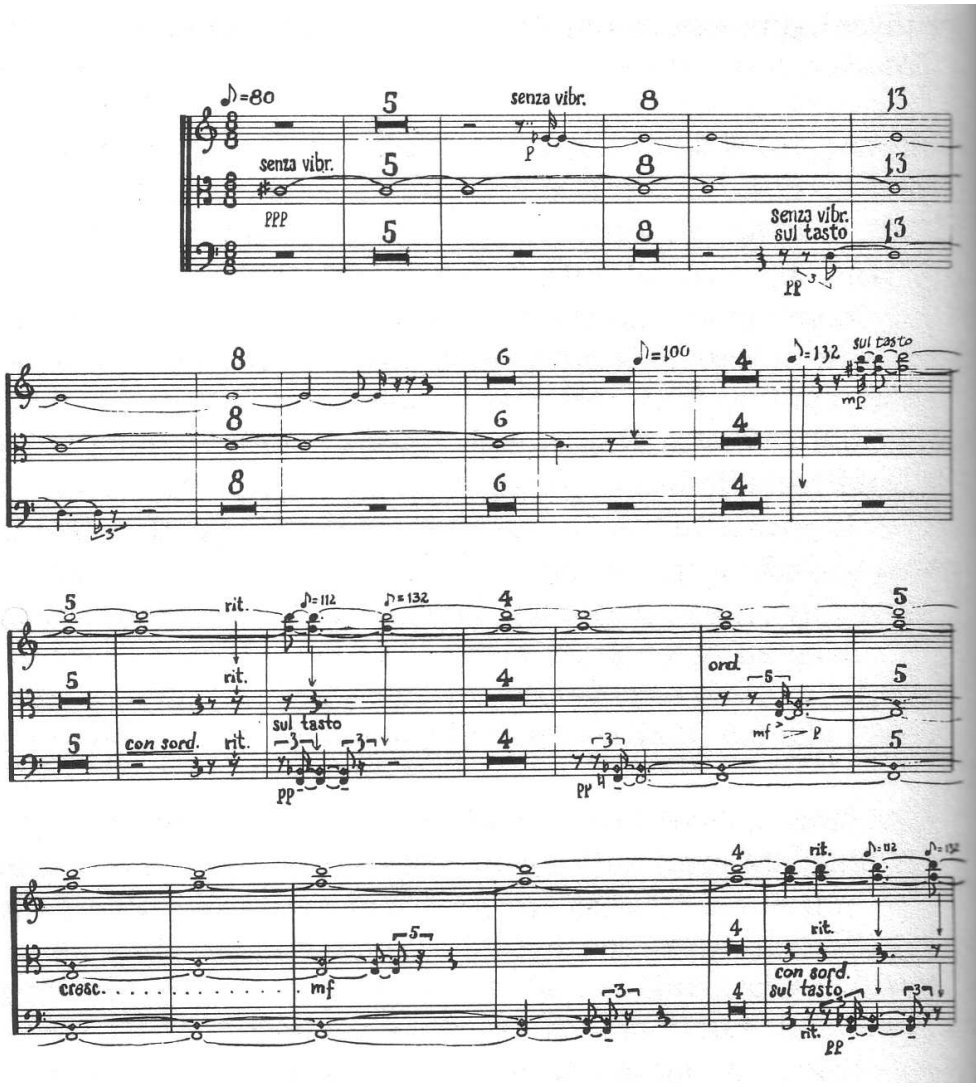


Figure 1.8. Nam June Paik at Mary Bauermeister's Atelier, Cologne, 1961

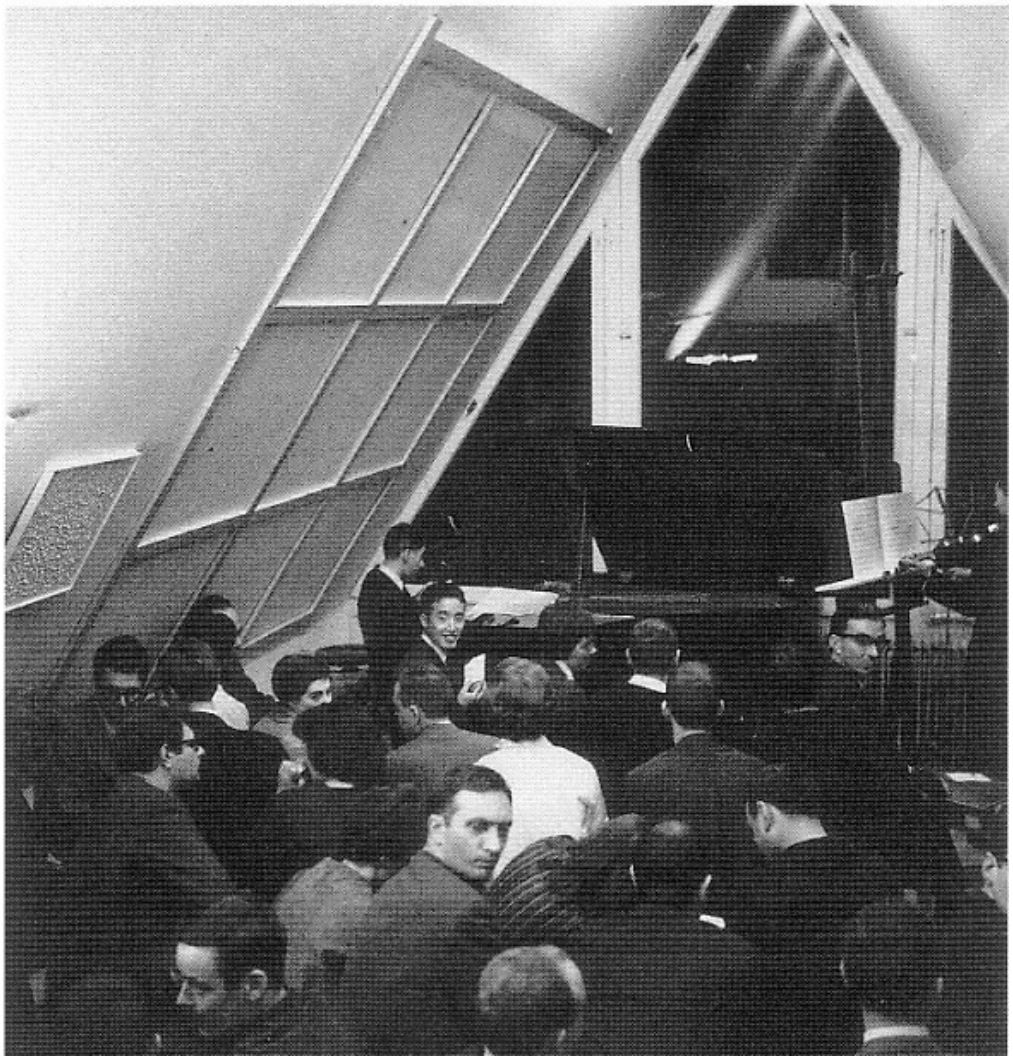
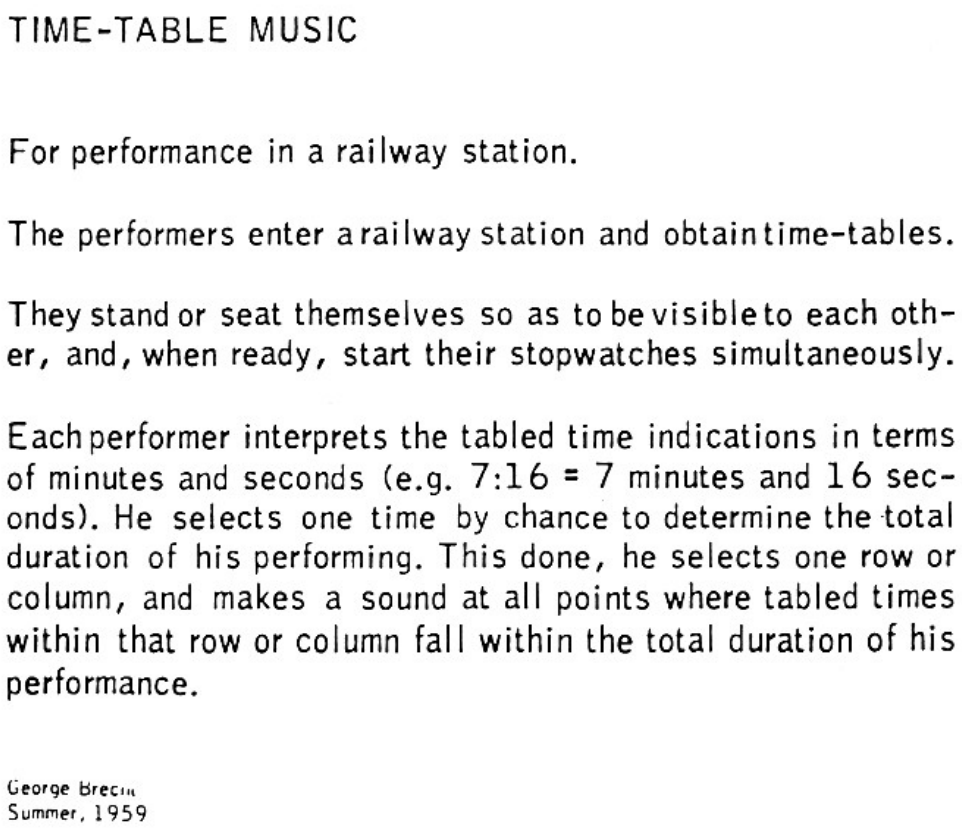


Figure 1.9. George Brecht, score for *Time-Table Music*, 1959



TIME-TABLE MUSIC

For performance in a railway station.

The performers enter a railway station and obtain time-tables.

They stand or seat themselves so as to be visible to each other, and, when ready, start their stopwatches simultaneously.

Each performer interprets the tabled time indications in terms of minutes and seconds (e.g. 7:16 = 7 minutes and 16 seconds). He selects one time by chance to determine the total duration of his performing. This done, he selects one row or column, and makes a sound at all points where tabled times within that row or column fall within the total duration of his performance.

George Brecht
Summer, 1959

Figure 1.10. La Monte Young, *Composition 1960 #7*, 1960

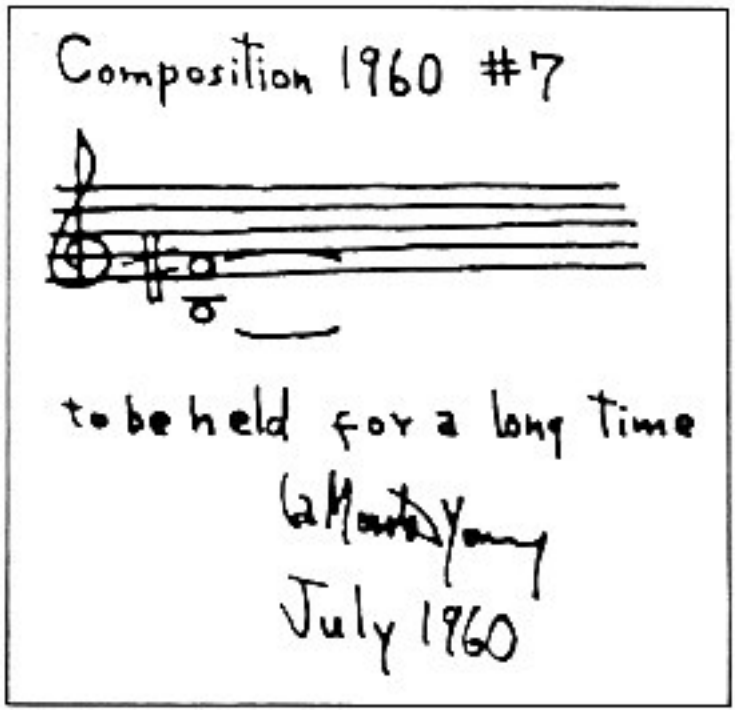


Figure 1.11. Nam June Paik, performance of *Zen for Head*, Fluxus Internationale Festspiele Neuester Musik, Städtisches Museum, Wiesbaden, Germany, 1962

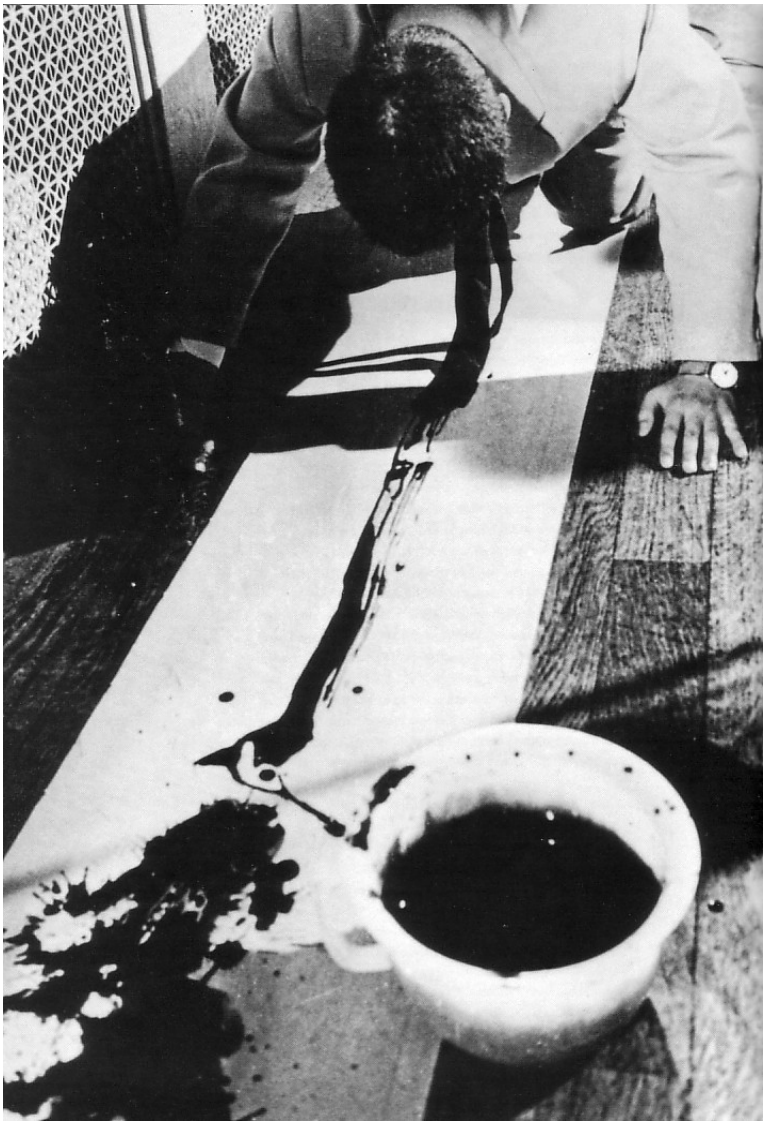
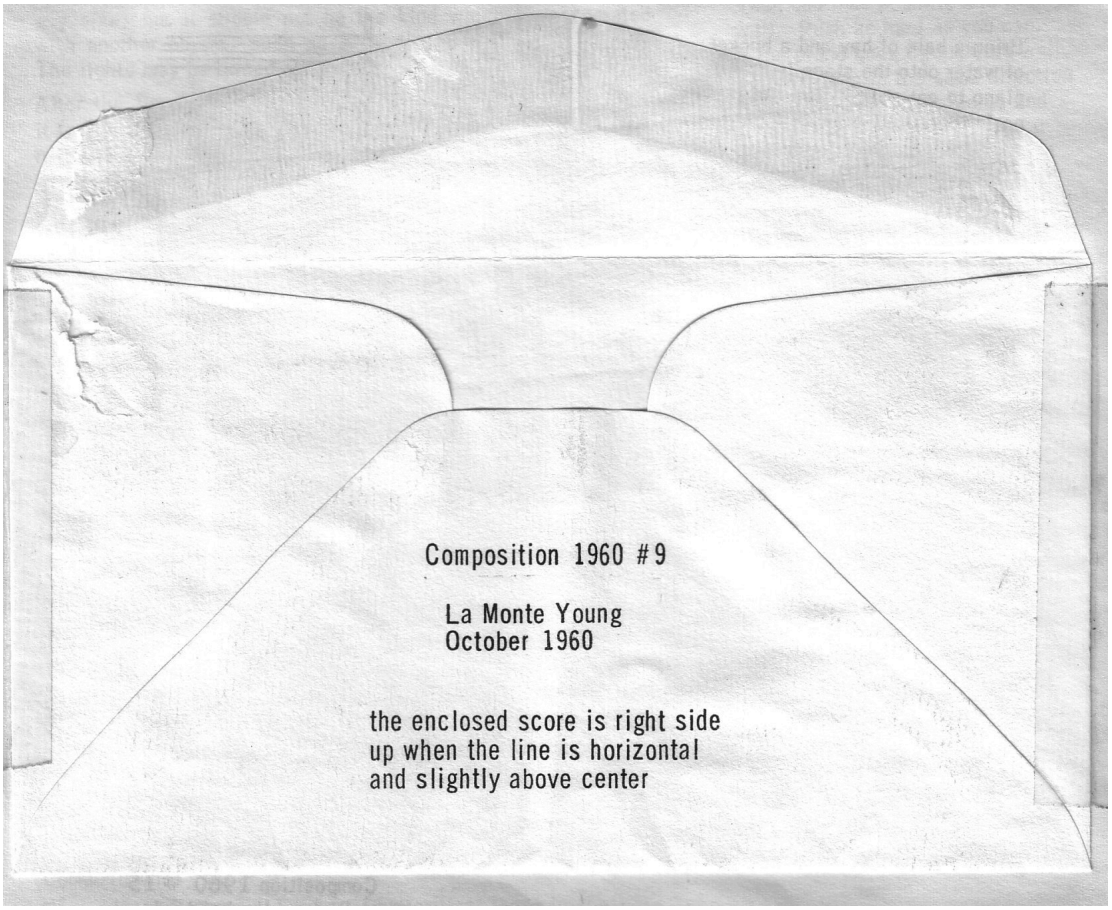


Figure 1.12. Nam June Paik, performance of *Zen for Head*, Fluxus Internationale Festspiele Neuester Musik, Städtisches Museum, Wiesbaden, Germany, 1962

Figure 1.13. Nam June Paik, *Zen for Head*, 1962. Ink and tomato on paper. 160 x 14 in. (406.4 x 35.56 cm). Collection of the Museum Wiesbaden.

Figure 1.14. La Monte Young, *Composition 1960 #9*, 1960



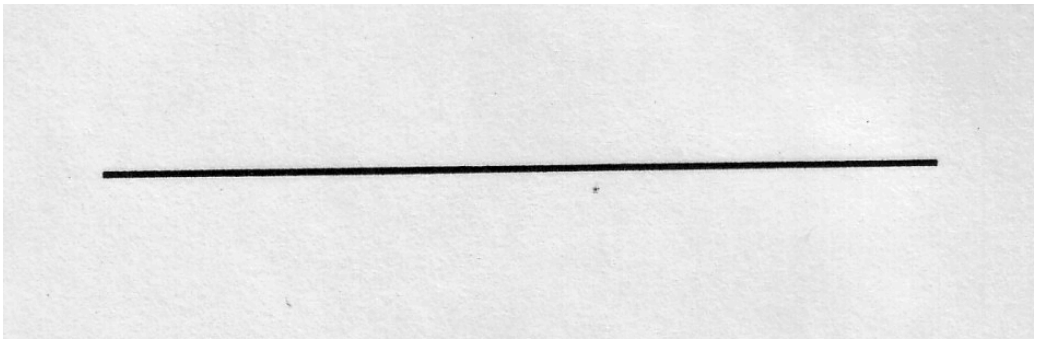


Figure 1.15. Peter Moore, photo sequence of George Brecht performing *Composition 1960 #2 [The Fire Piece]*, 1964

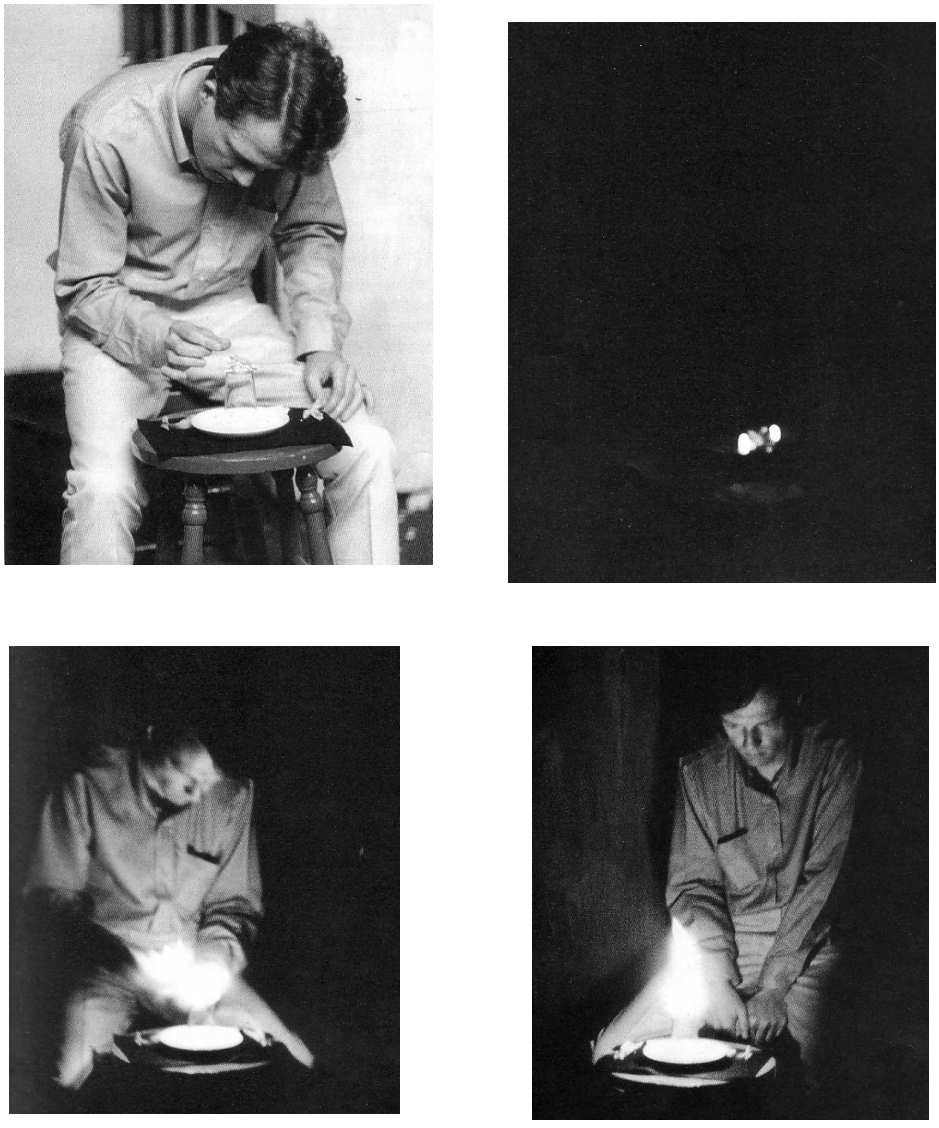


Figure 1.16. La Monte Young, *Piano Piece for David Tudor #1*, 1960

Figure 1.17. Marian Zazeela, *Performance of 10 20 62 of La Monte Young Composition 1960 #13 to Richard Huelsenbeck*, 1962

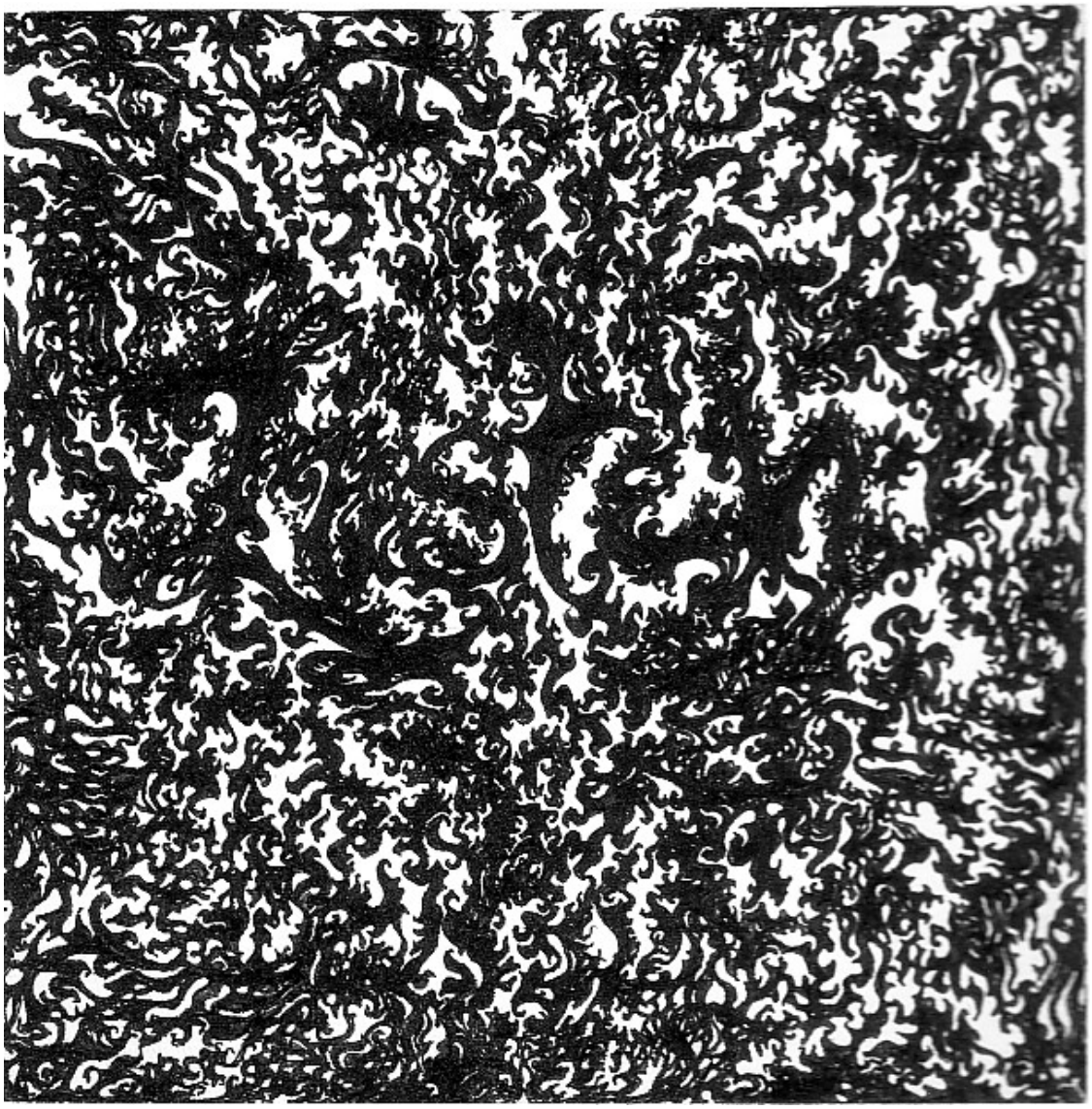


Figure 1.18. La Monte Young, *LY 1961*, 1963. Book published by Fluxus (1963). 3 ½ x 3½ in. (9 x 9 cm)

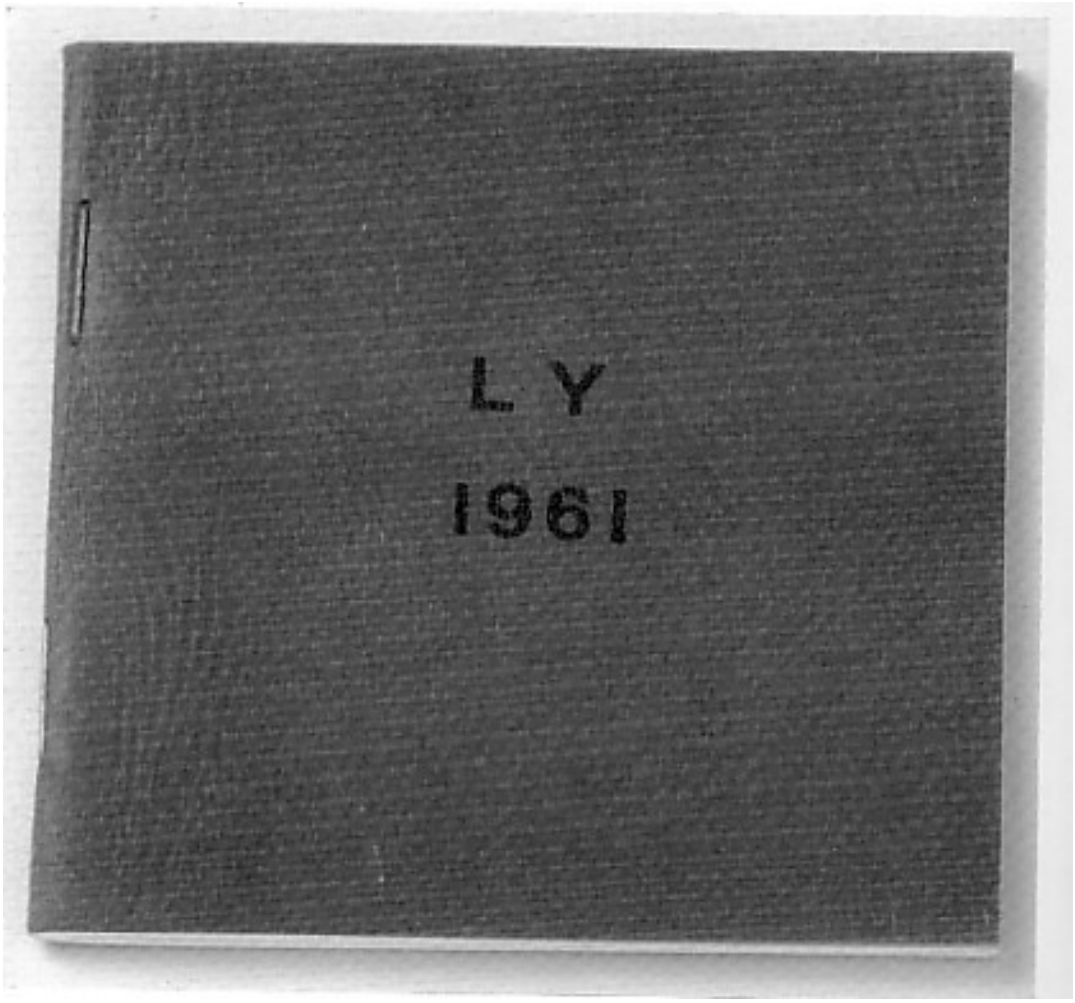


Figure 1.19. Henry Flynt, concert flyer for Young's *Compositions 1961* at Harvard University, March 31, 1961.

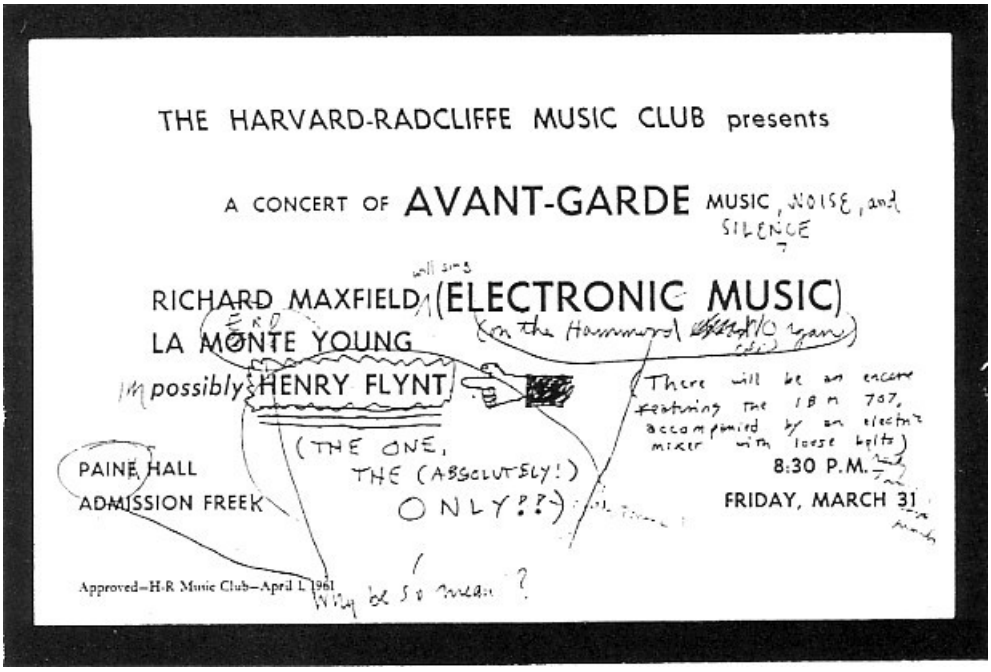


Figure 1.20. Poster from La Monte Young's performance of *Compositions 1961* at Yoko Ono's Chambers Street Loft, 1961

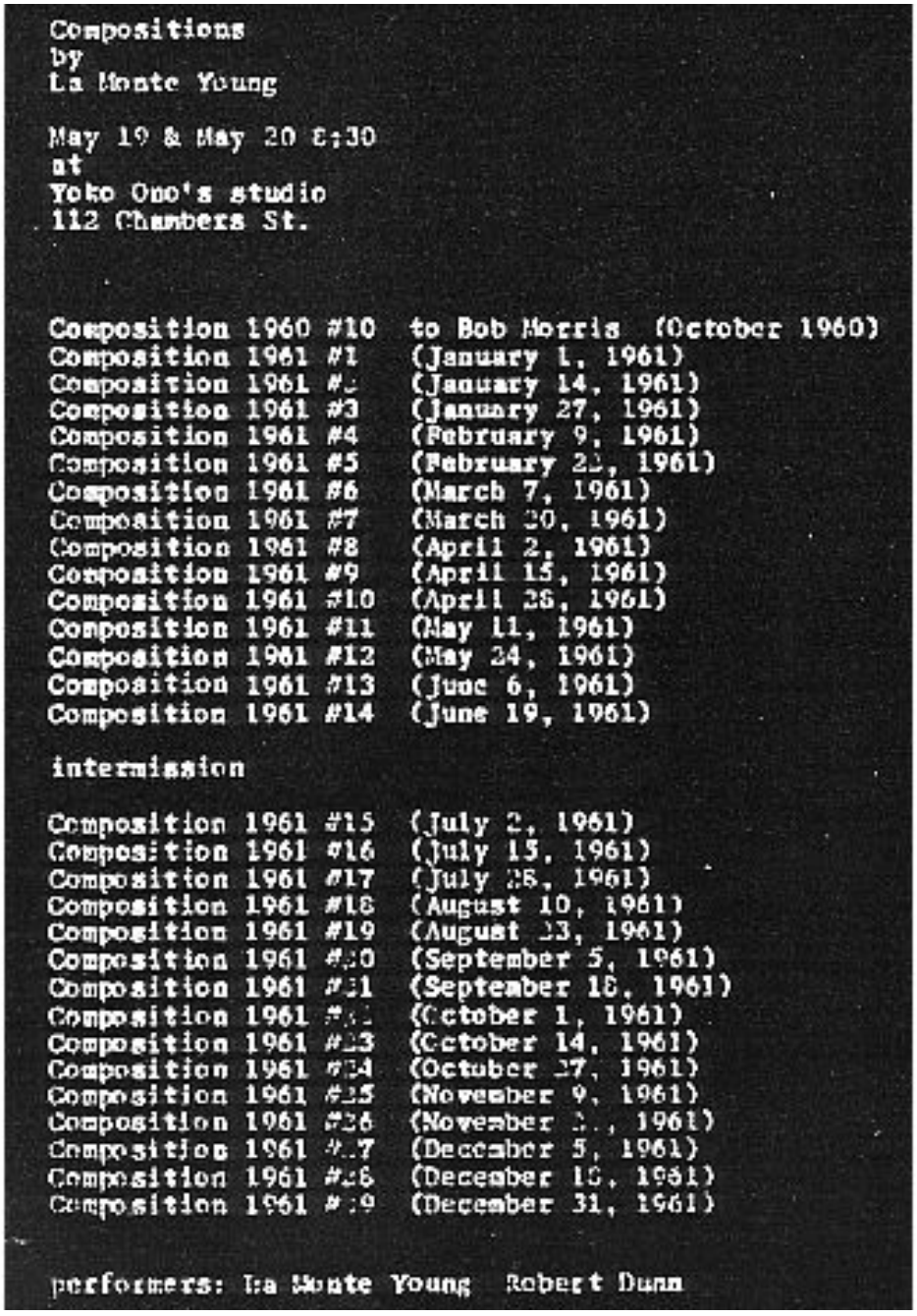


Figure 1.21. Frontispiece for *An Anthology of chance operations*, 1963

Figure 1.22. Emmett Williams performing *Counting Song for La Monte Young*, Festum Fluxorum, Düsseldorf, 1963

Figure 1.23. La Monte Young conducting a rehearsal of Brecht's *Symphony No. 3 Fluxversion 1* with the Fluxorchestra, New York, 1965

Figure 1.24. The Fluxorchestra's simultaneous performance of Yoko Ono's *Sky Piece to Jesus Christ* and *Piece for La Monte Young 1965*, Carnegie Hall, New York, 1965

Figure 1.25. George Maciunas, photo of The Theatre of Eternal Music: (L to R) Tony Conrad, Marian Zazeela, La Monte Young, and John Cale at the Pocket Theatre, New York, 1964. Gong by Robert Morris.

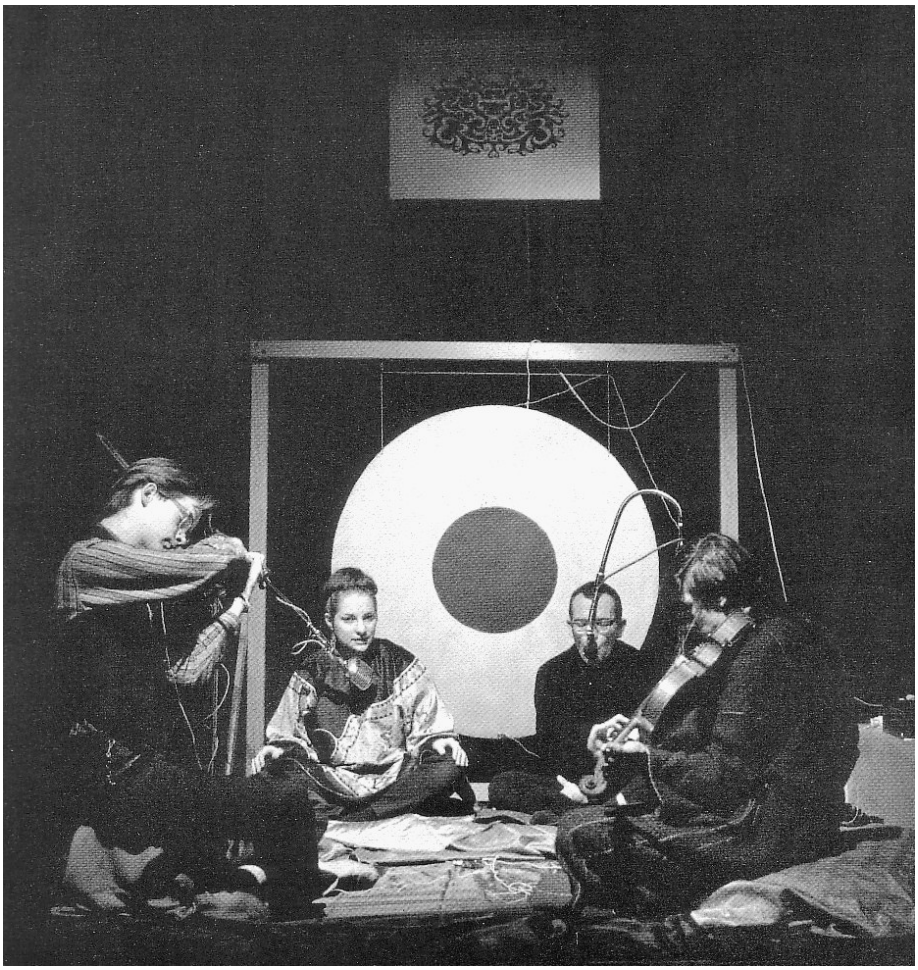


Figure 1.26. Peter Moore, photo of La Monte Young at the Yam Festival, George Segal's farm, New Brunswick, NJ, 1963

Figure 2.1. Poster for Park Place Invitational Show, March-April 1964, with Poons's and Valledor's names on upper right side. Collection of Park Place Gallery Art Research, Inc., Records and Paula Cooper Gallery Records 1965-1973, Archives of American Art, Smithsonian Institution.

Figure 2.2. Ugo Mulas, photo of Larry Poons in his studio, 1965.

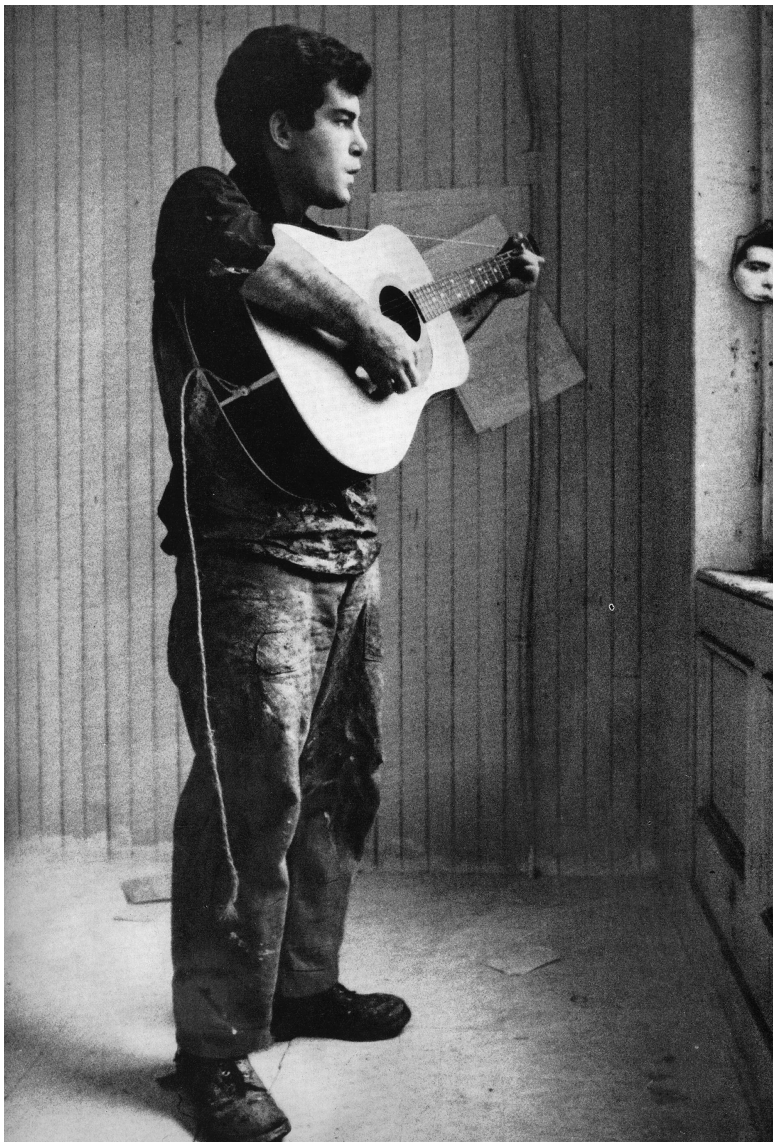


Figure 2.3. Ugo Mulas, photo of Larry Poons in his studio, 1965.

Figure 2.4. Larry Poons, *Orange Crush*, 1963. Acrylic on canvas, 80 x 80 in., Albright-Knox Art Gallery, Buffalo, NY.

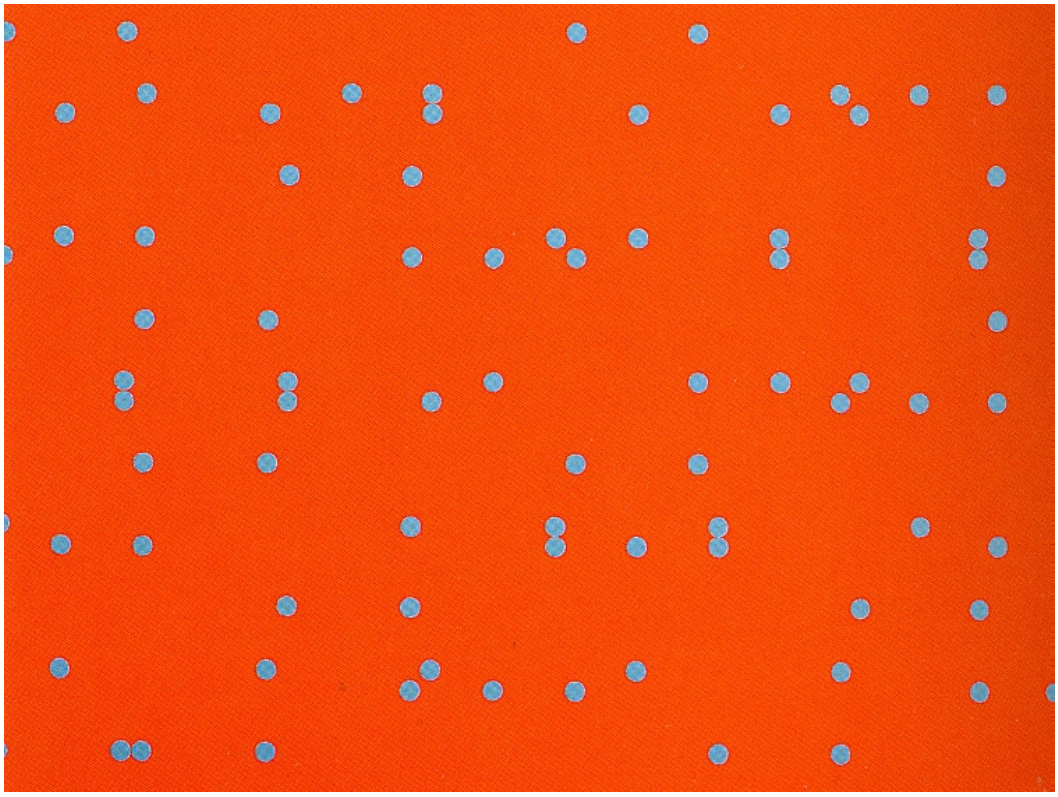


Figure 2.5. Larry Poons, *East India Jack*, 1964. Acrylic on canvas, 72 x 144 in., Yale University Art Gallery, New Haven, CT.

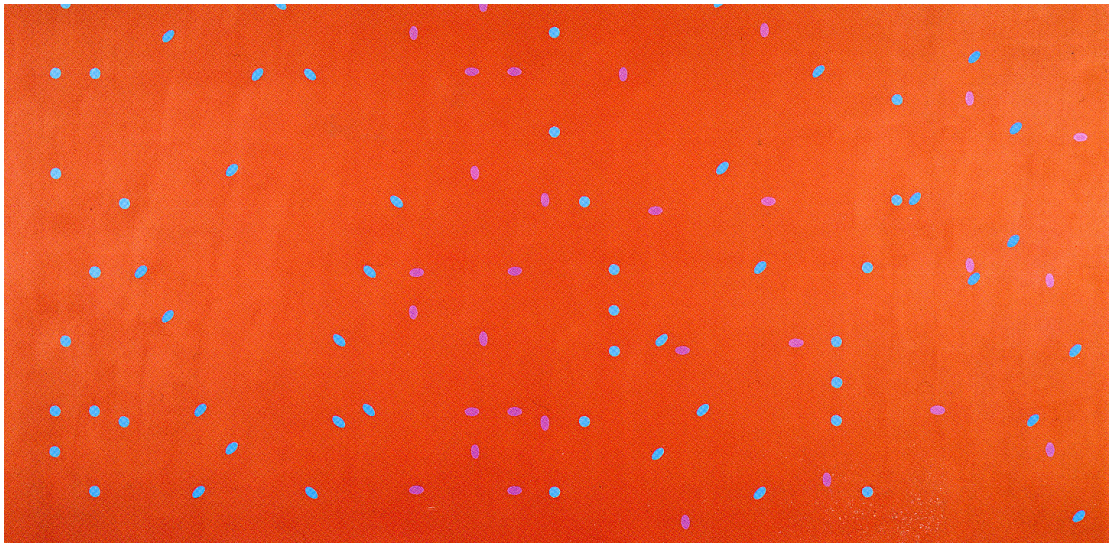


Figure 2.6. Larry Poons, untitled drawing, 1962. Graphite and red watercolor on graph paper with blue lines, 13 x 16 15/16 in., National Gallery of Art, Washington, DC.

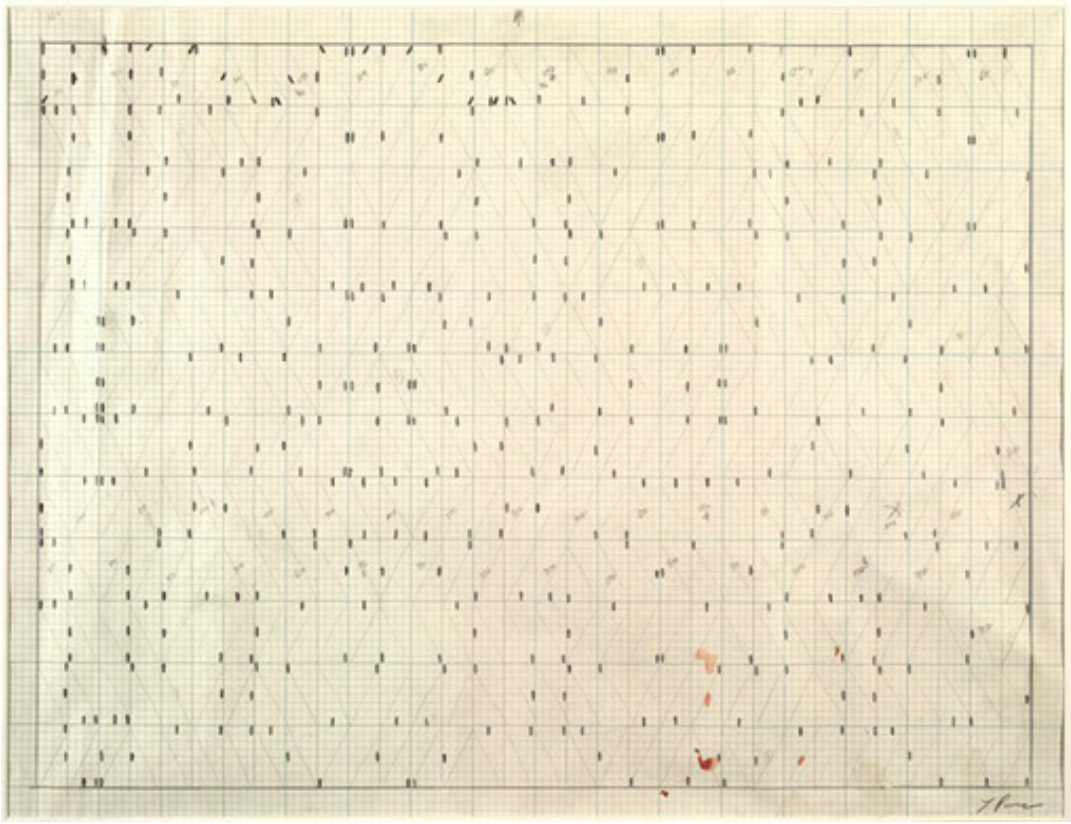


Figure 2.7. Piet Mondrian, *Broadway Boogie-Woogie*, 1942-43. Oil on canvas, 50 x 50 in., Museum of Modern Art, New York, NY.

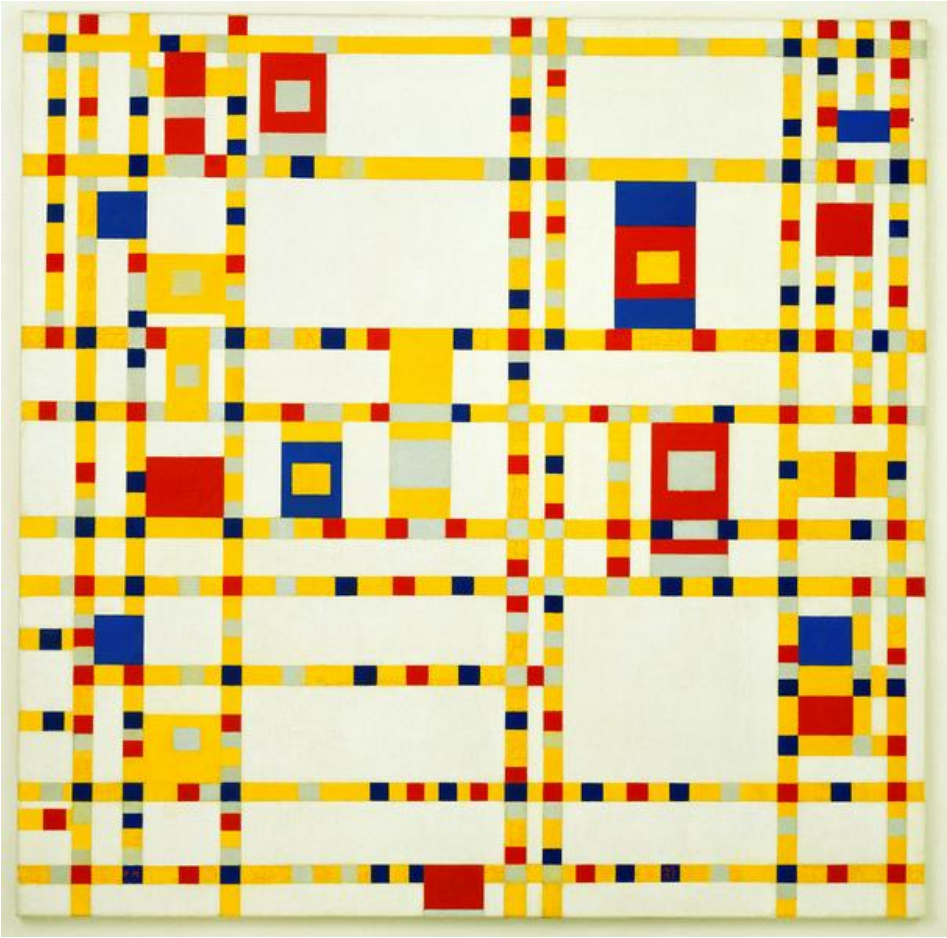


Figure 2.8. Barnett Newman, *Vir Heroicus Sublimis*, 1950-51. Oil on canvas, 95 ¼ x 202 ½ in., Museum of Modern Art, New York, NY.

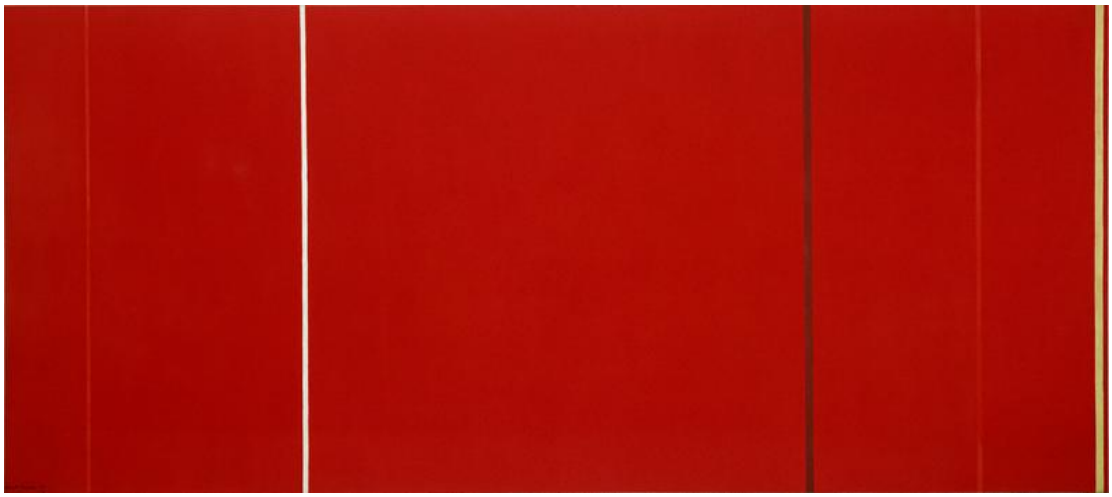


Figure 2.9. Harvey Gross, photo of John Cage's experimental composition class at the New School for Social Research, 1958.

Figure 2.10. Peter Moore, photo of Poons performing at Douglass College's "An Experiment in the Arts" weekend, April 1963.

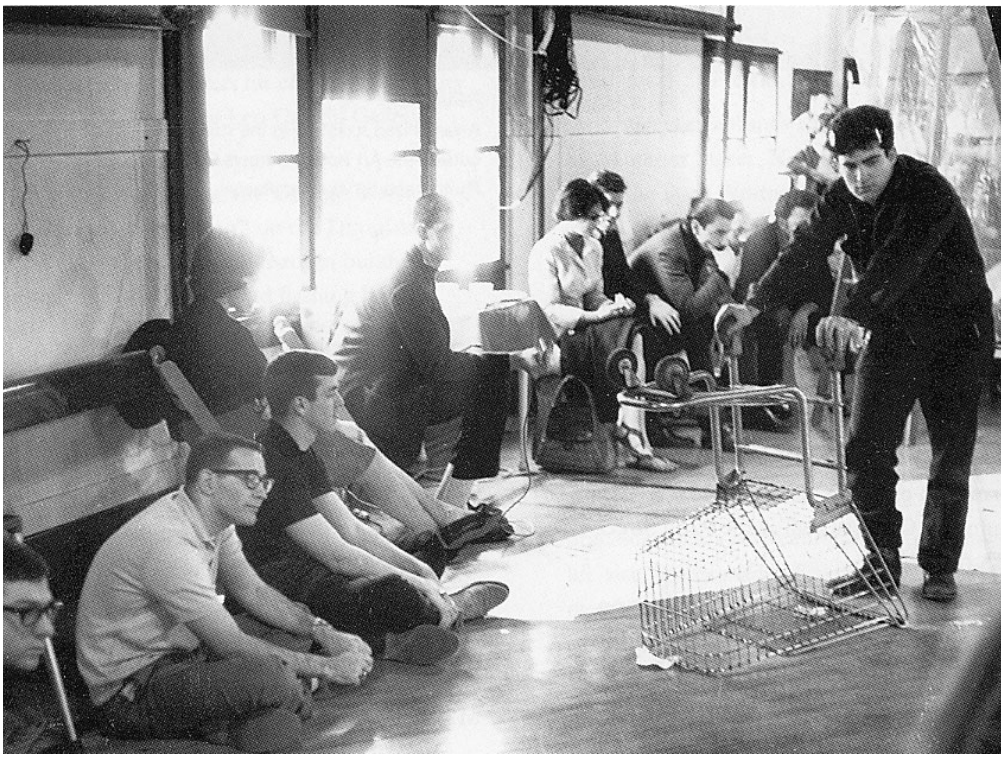


Figure 2.11. Robert Adler, photo of La Monte Young and Marian Zazeela in concert with lights in a double diamond configuration, 1972.

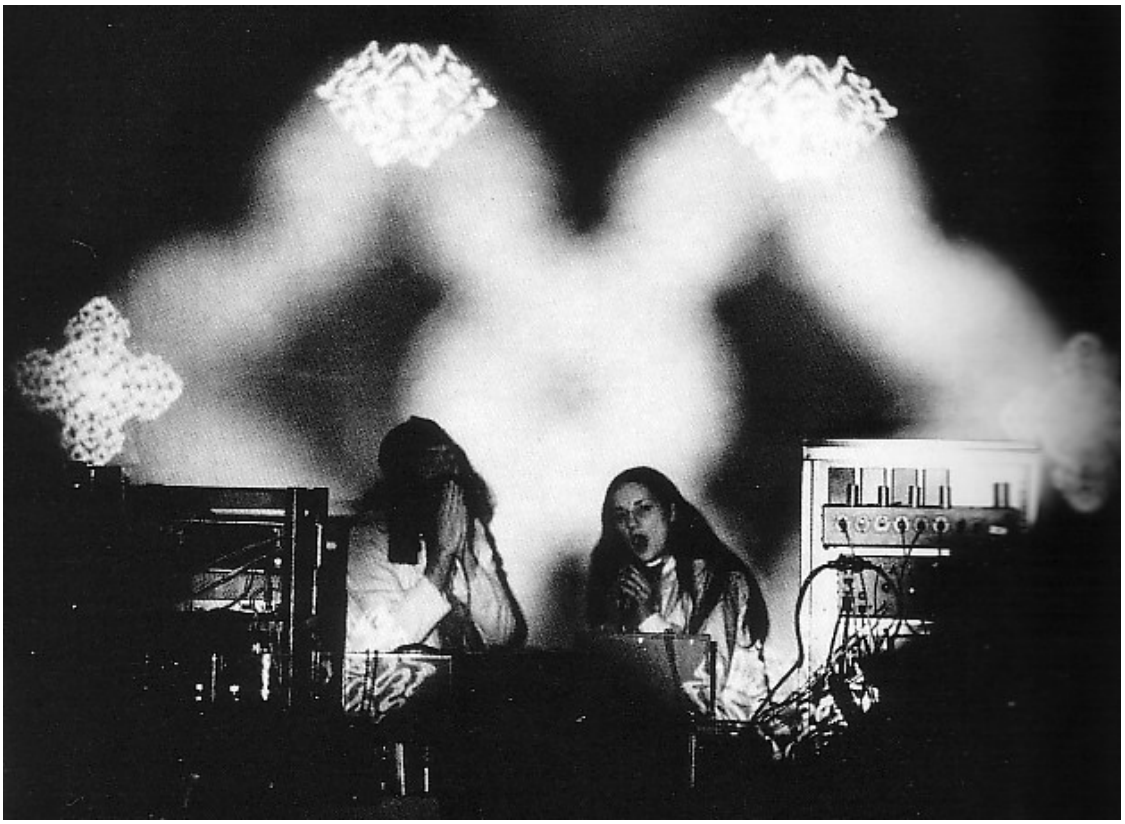


Figure 2.12. Poons, untitled drawing, 1967. Graphite on graph paper, Smithsonian American Art Museum, Washington, DC.

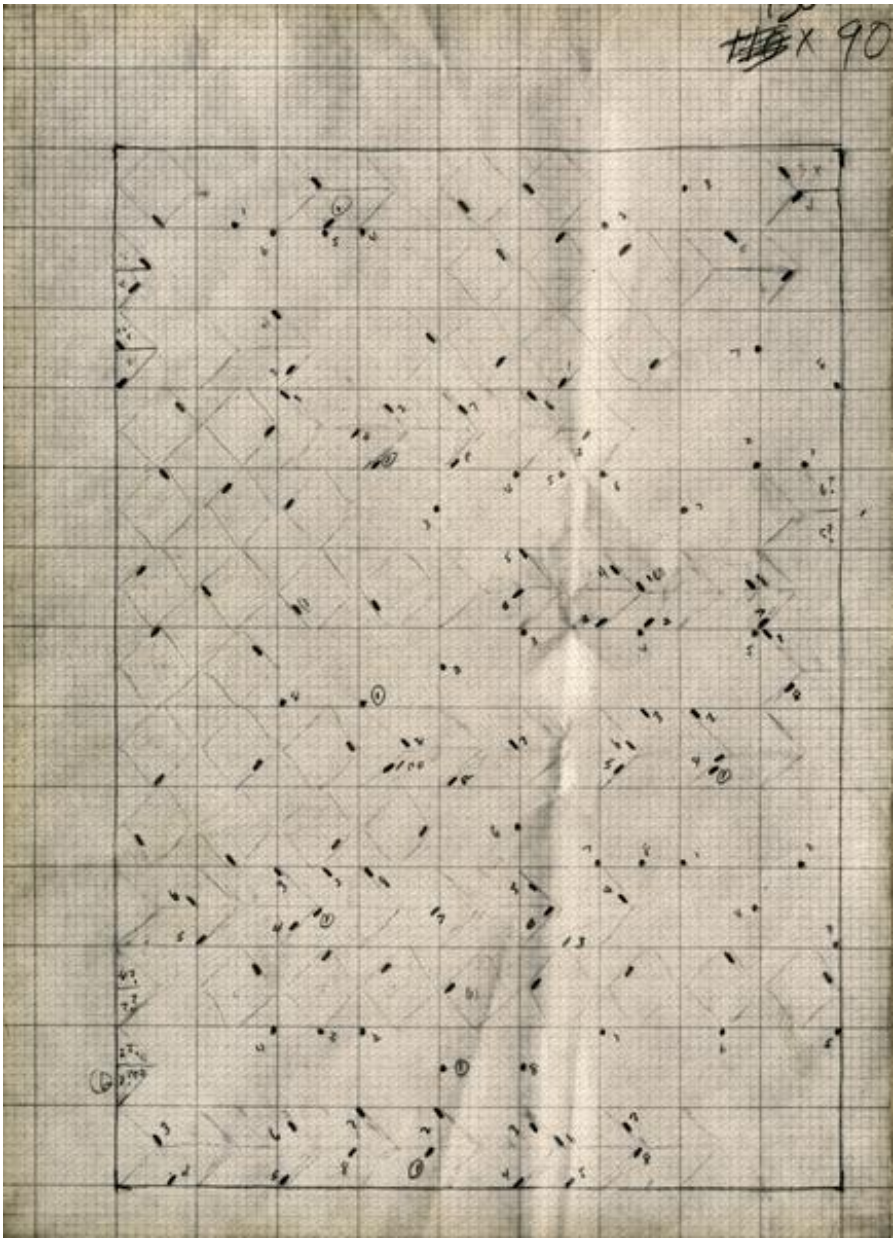


Figure 2.13. The Theatre of Eternal Music at the Four Heavens, Feb. 6, 1966.

Figure 2.14. Larry Poons, *Day on Cold Mountain*, 1962. Acrylic and dye on canvas, 80 ¾ x 80 ¾ in., Hirshhorn Museum and Sculpture Garden, Washington, DC.

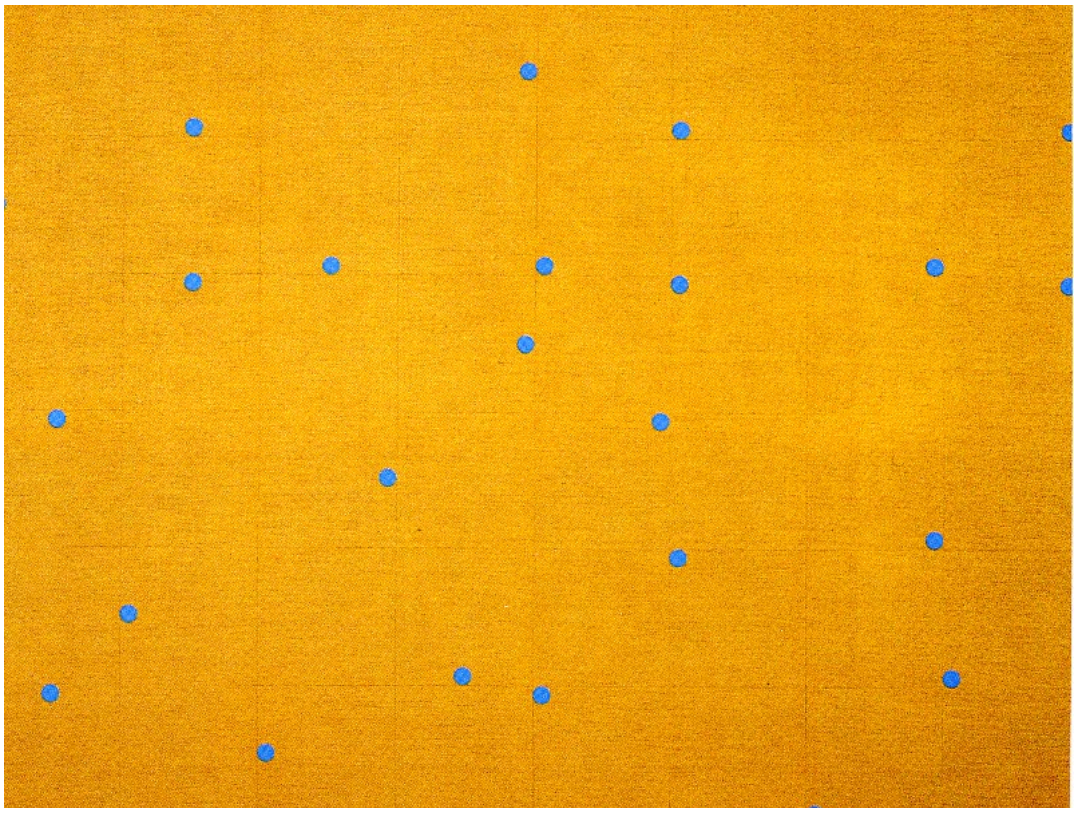


Figure 2.14. Larry Poons, *Night on Cold Mountain*, 1962. Synthetic polymer paint and dye on canvas, 80 x 80 in., Museum of Modern Art, New York.

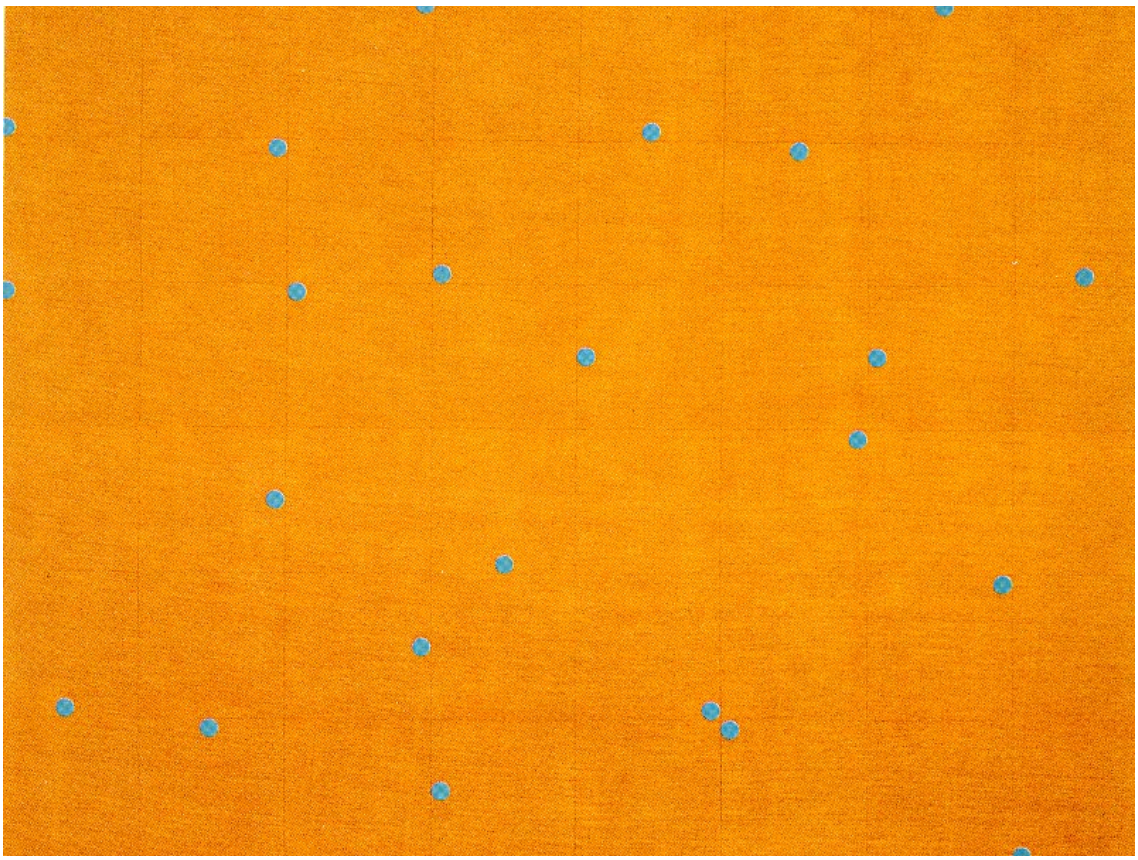


Figure 2.16. Larry Poons, *Han-San Cadence*, 1963. Acrylic on canvas, 72 x 144 in., Des Moines Art Center, Des Moines, IA.

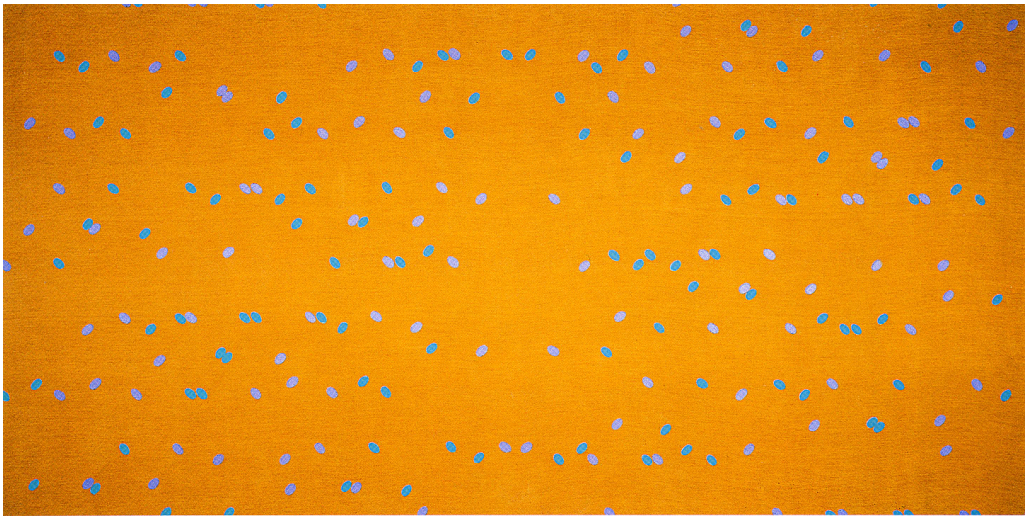


Figure 2.17. Larry Poons, *Enforcer*, 1962. Acrylic and spray technique on canvas, 80 ¼ x 80 ¼ in., St. Louis Art Museum, St. Louis, MO.

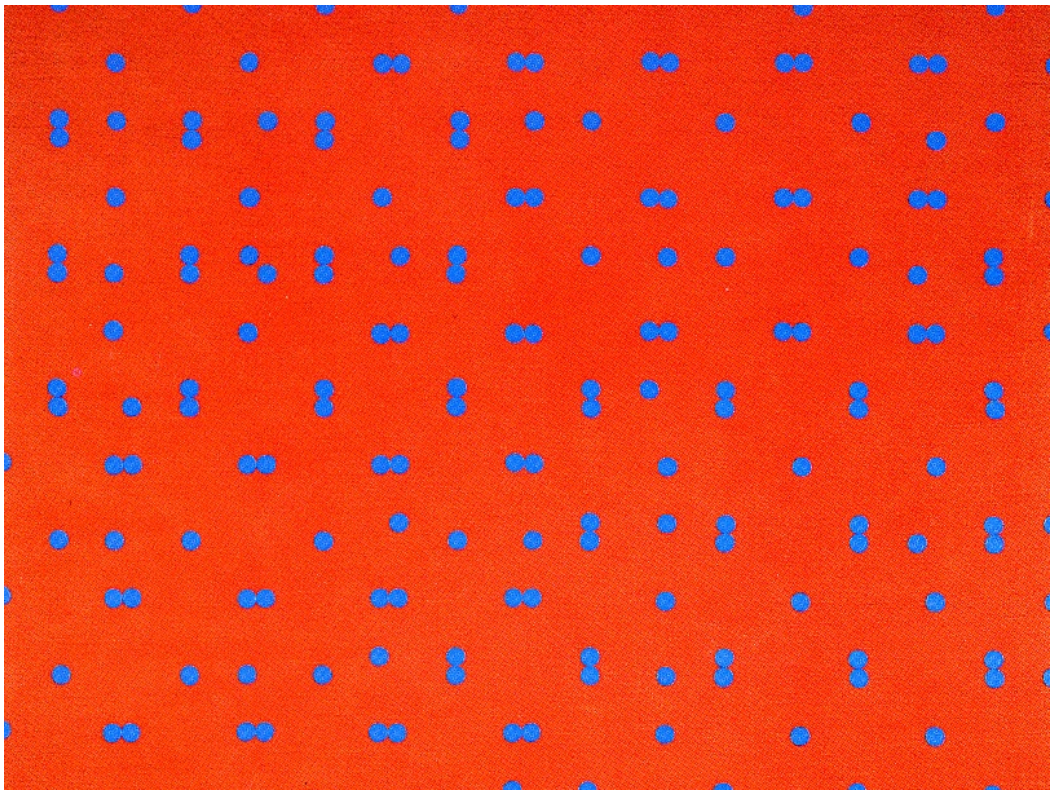


Figure 2.18. Johann Sebastian Bach, part of score for *Prelude to Cello Suite*, 1717-23.

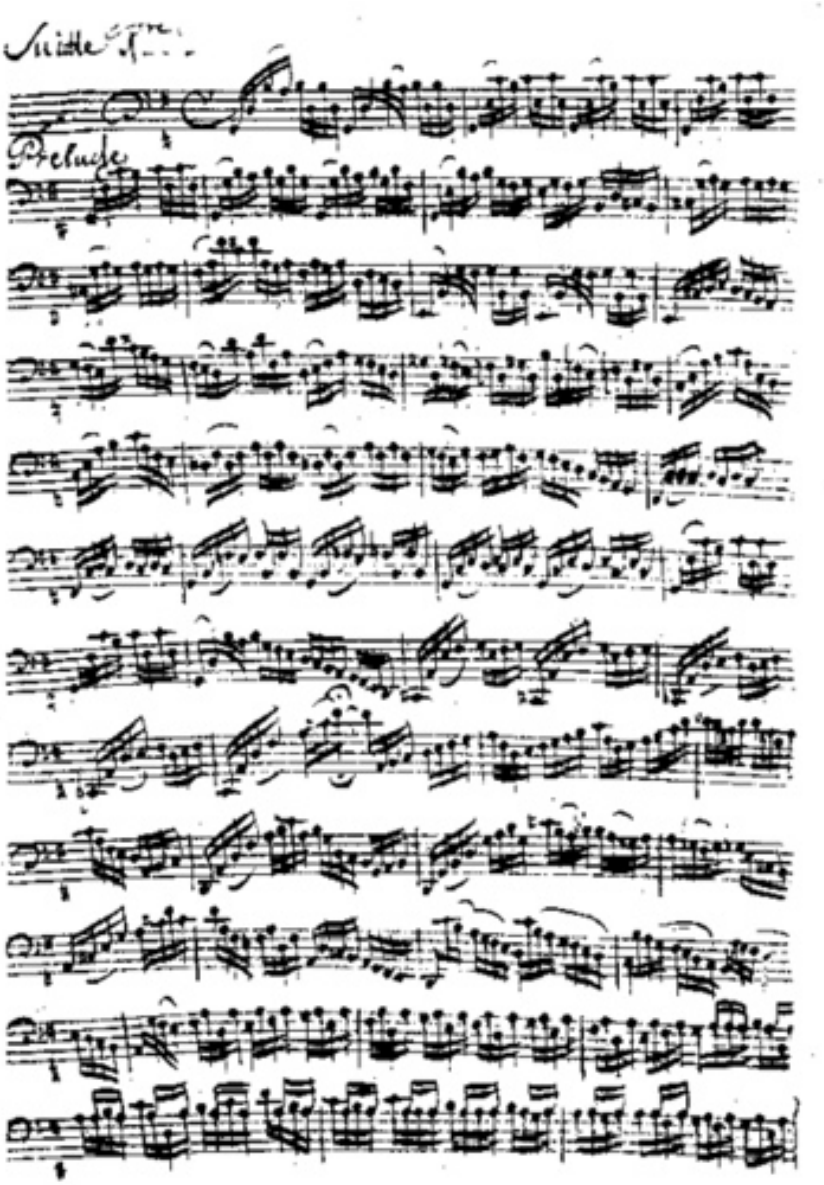


Figure 2.19. György Ligeti, part of score for *Artikulation*, 1958.

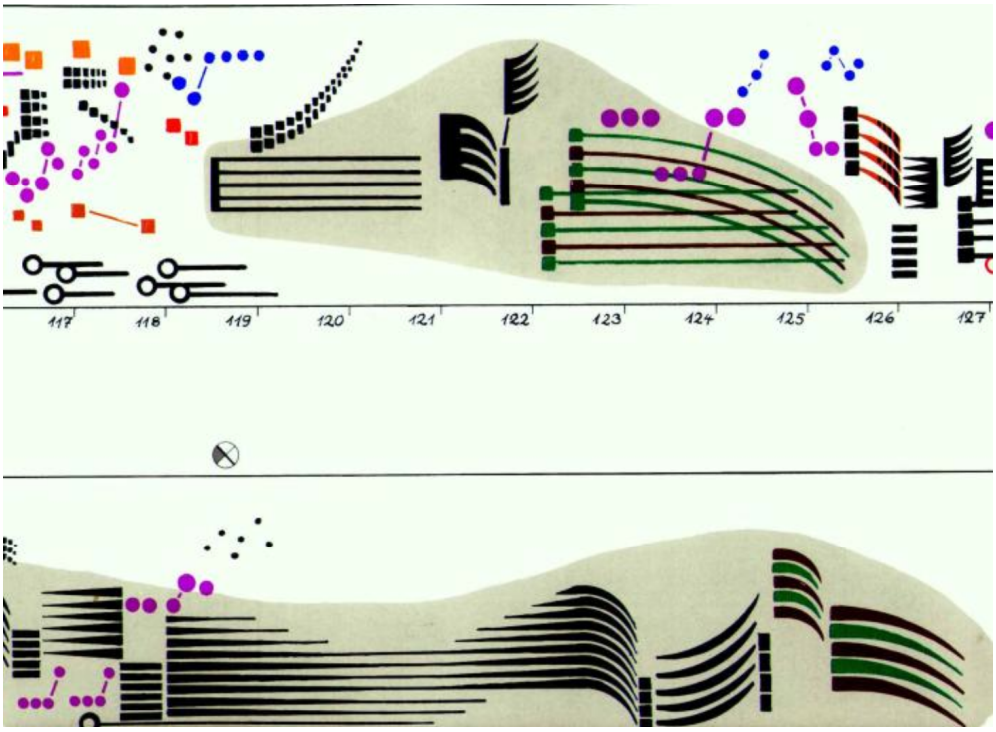


Figure 2.20. Earle Brown, score for *December 1952*, 1952.

Figure 2.21. Cornelius Cardew, page 131 from *Treatise*, 1964-1967.

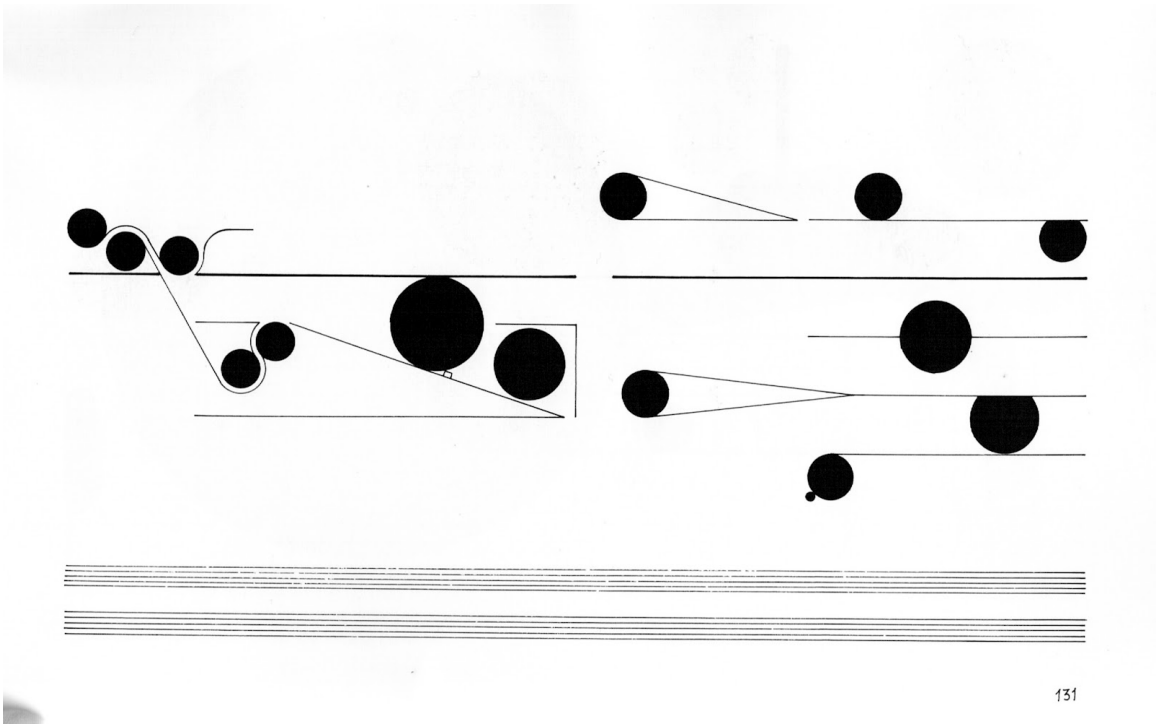


Figure 2.22. John Cage, part of score for *Variations II*, 1961.

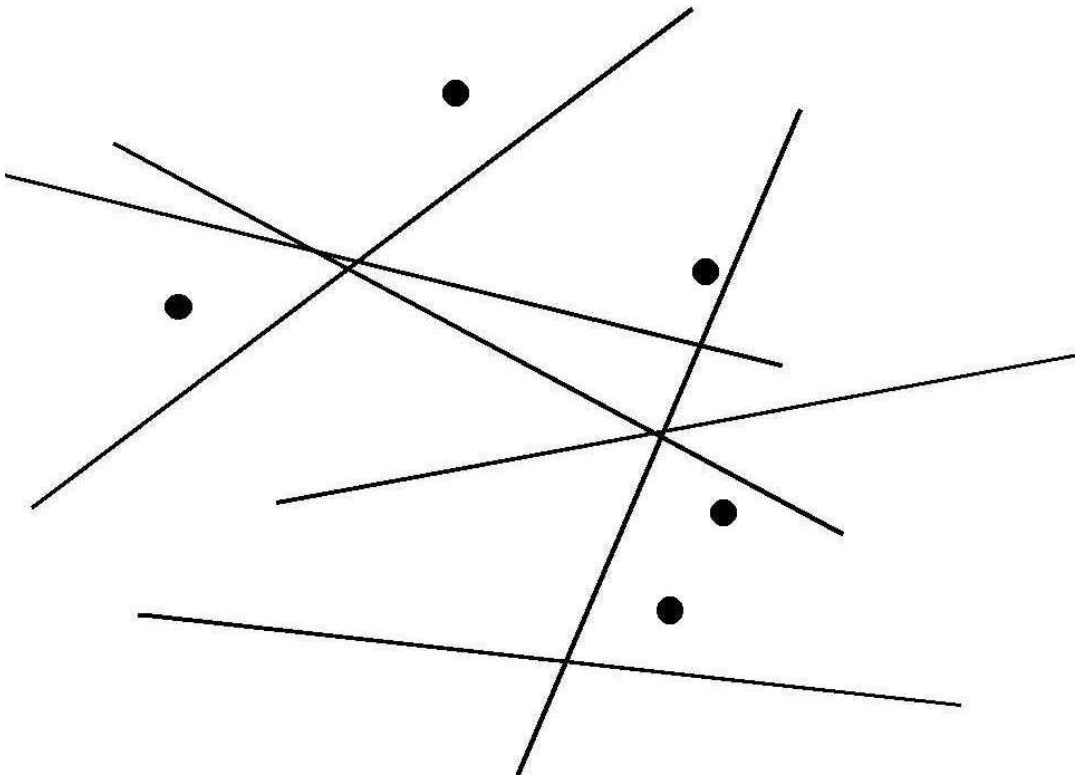


Figure 2.23. Ugo Mulas, photo of Larry Poons in his studio, 1965.

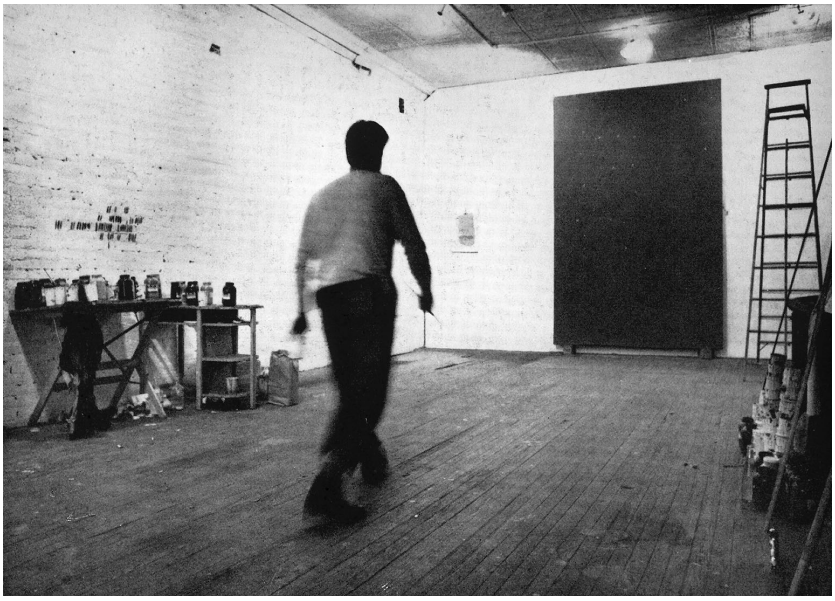


Figure 2.24. Ugo Mulas, photo of Larry Poons in his studio, 1965.

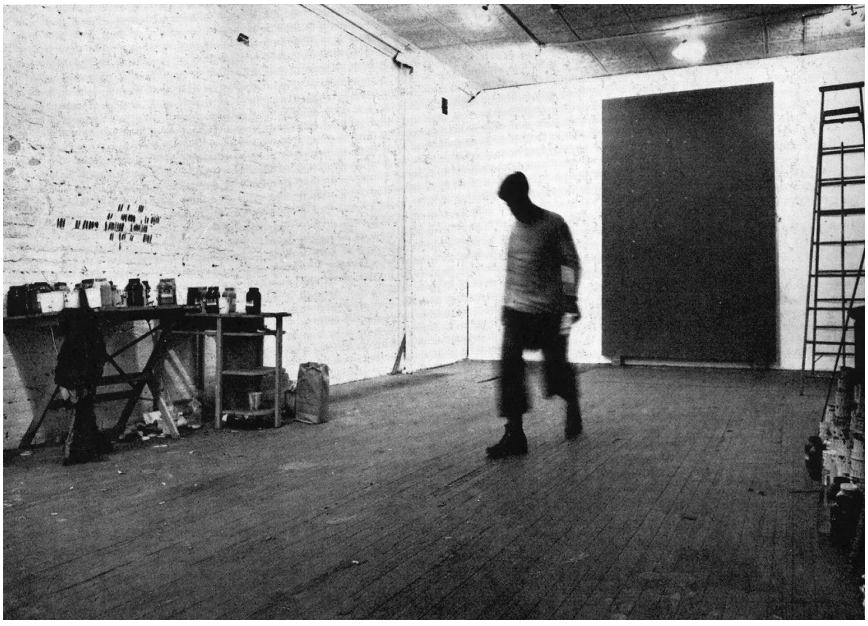


Figure 2.25. Larry Poons, detail of *Via Regia*, 1964. Acrylic on canvas, 72 x 144 in., Hirshhorn Museum and Sculpture Garden, Washington, DC.

Figure 2.26. Larry Poons, *Euthalia*, 1963. Acrylic on canvas, 80 ½ x 80 ½ in., Hirshhorn Museum and Sculpture Garden, Washington, DC.

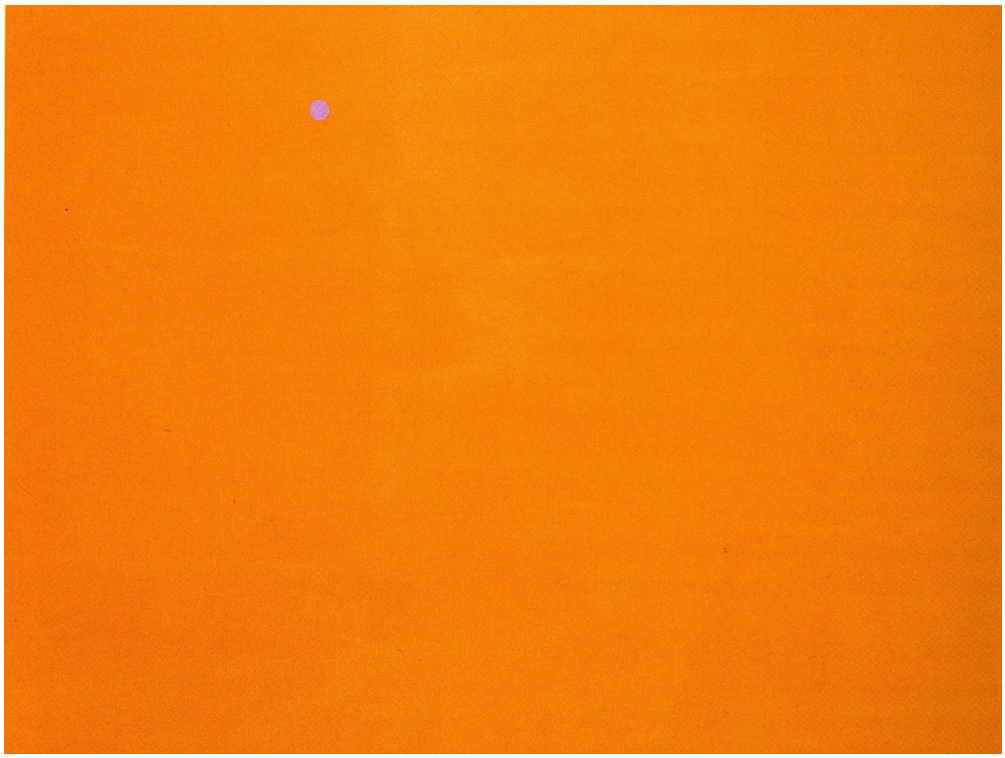


Figure 2.27. John Cage, score for *4'33"*, 1951.

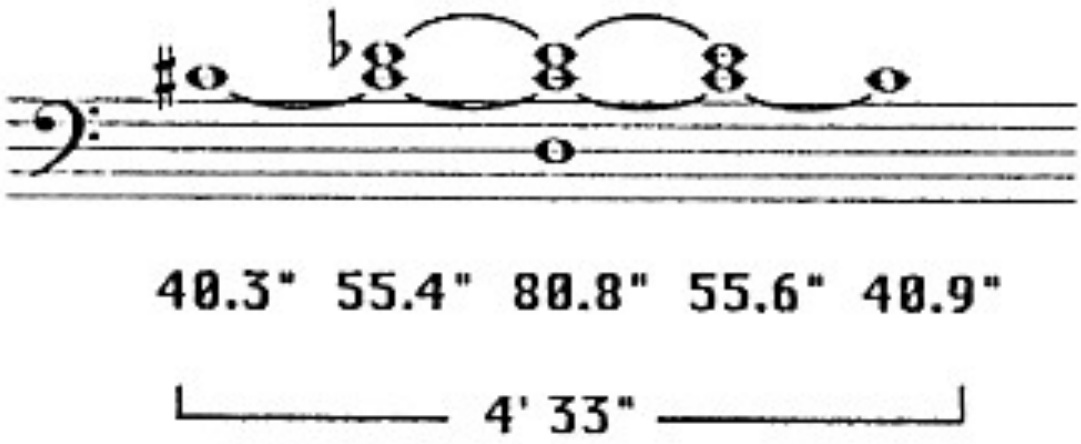


Figure 2.28. Leo Valledor, *Whose Blues?*, 1958. Oil on masonite, 48 x 48 in., Collection of the San Francisco Museum of Modern Art. Photo by the author.

Figure 2.29. Leo Valledor, *Shake, Rattle, and Roll*, 1955. Ink on paper, circa 18 in, Collection of Mary Valledor. Photo by the author.

Figure 2.30. The Park Place Gallery Band, February 1967. From left to right: two unknown musicians, Frosty Myers (drums), Ronald Bladen (saxophone), Phil Wofford (pocket trumpet), Paul Ehrlich (saxophone), Dean Fleming (saxophone).

Figure 2.31. Leo Valledor, *Becoming* [Untitled], 1963. Acrylic on canvas, Collection of Mary Valledor, San Francisco.

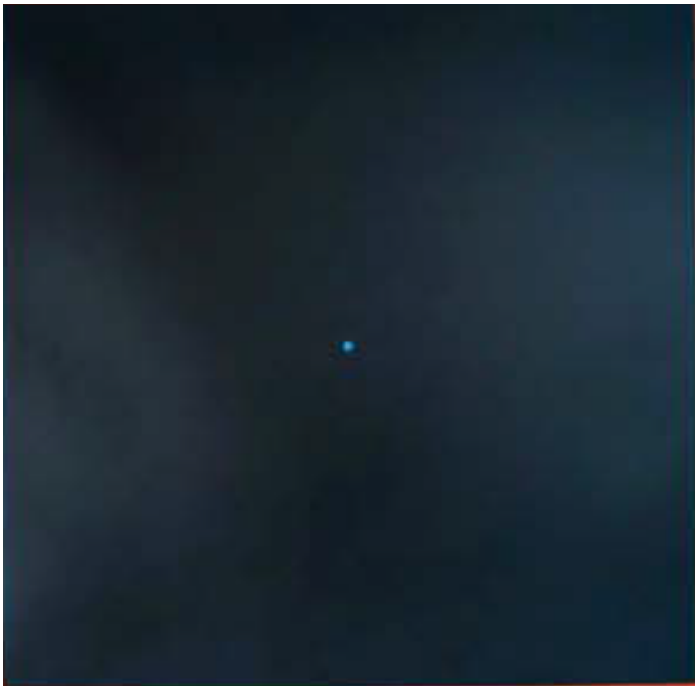


Figure 2.32. Leo Valledor, *Earth Sign*, mid-1960s. Acrylic on canvas, 84 ½ x 60 in., Collection of Mary Valledor, San Francisco.

Figure 2.33. Leo Valledor, *Serena*, 1964. Acrylic on canvas, each of two panels 36 x 110 x 3 in., Collection of Mark di Suvero, New York.

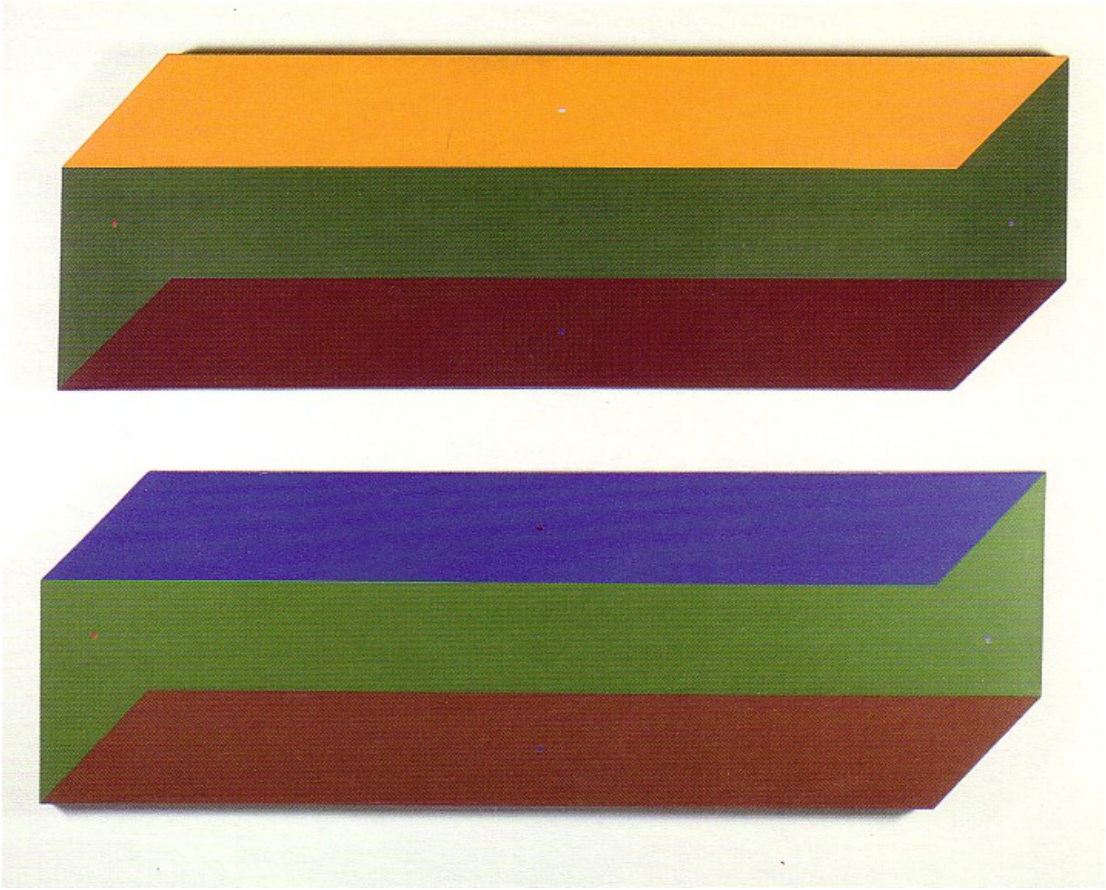


Figure 2.34. Leo Valledor, *The Calm*, 1966. Acrylic on canvas, 15 1/16 x 84 7/16 in., Collection of the Philadelphia Museum of Art.

Figure 2.35. Leo Valledor, *Quintessence (for Edgar Varèse)*, 1966. Acrylic on canvas, 25 x 120 in., Collection of Mr. and Mrs. Mike Engel, New York.

Figure 2.36. Edgard Varèse, diagram for *Poème Electronique*, 1957.

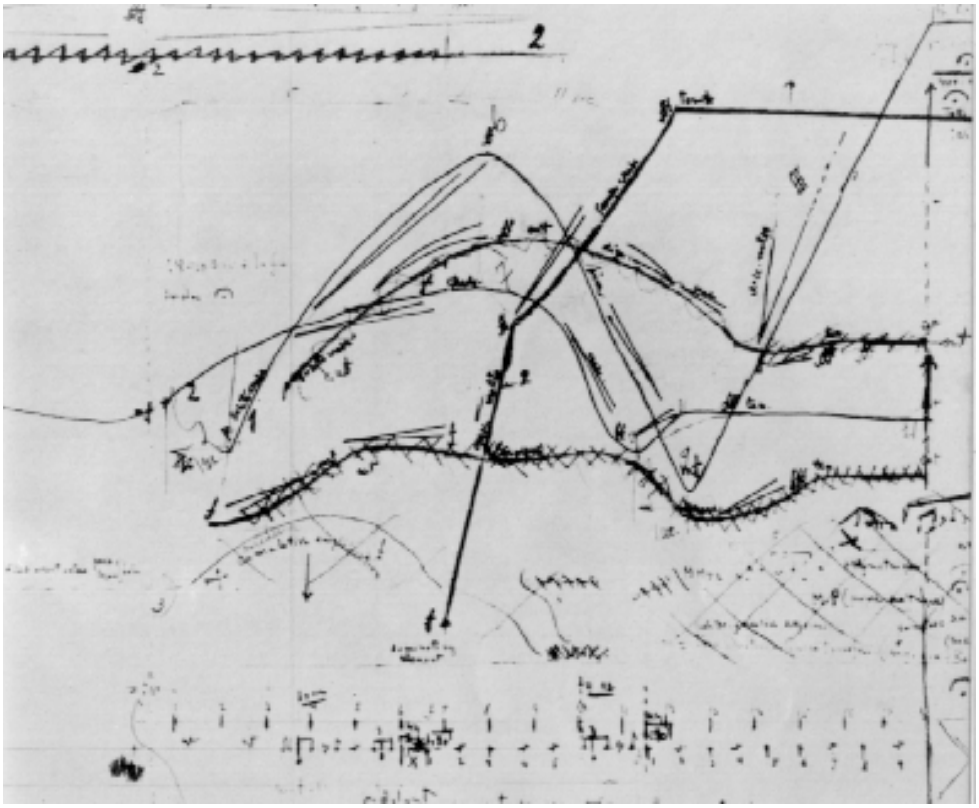


Figure 2.37. Le Corbusier, Iannis Xenakis, and Edgard Varèse, the Philips Pavilion, Brussels, 1958.

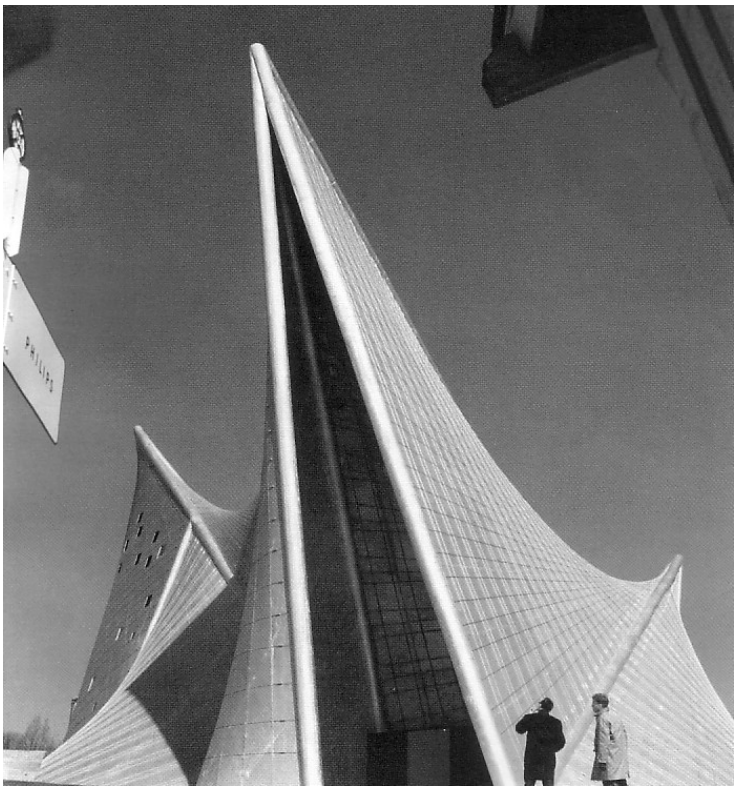


Figure 2.38. Iannis Xenakis, the Mathematical Object and wall speakers in violet light, Philips Pavilion, Brussels, 1958.

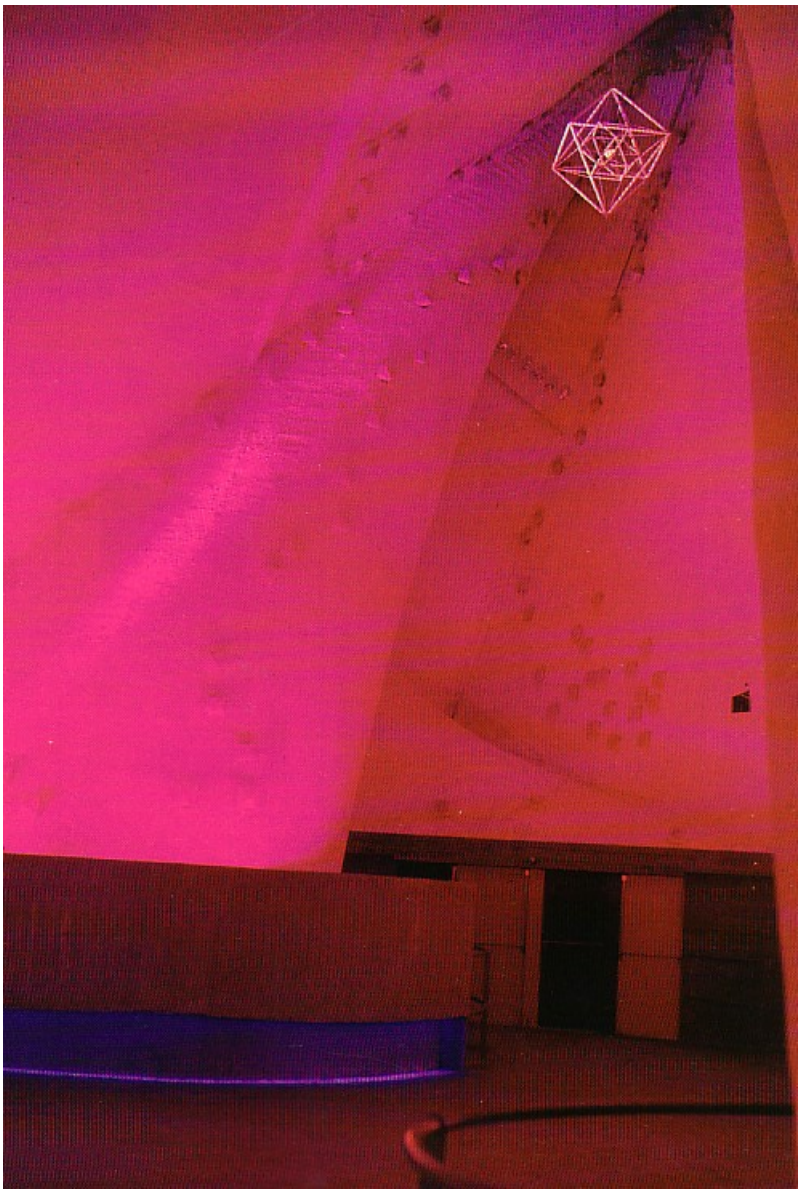


Figure 3.1. Composers at Darmstadt, 1956 (right to left: Pierre Boulez, Bruno Maderna, Karlheinz Stockhausen).

Figure 3.2. Karlheinz Stockhausen, page of score for *Kreuzspiel*, 1951.

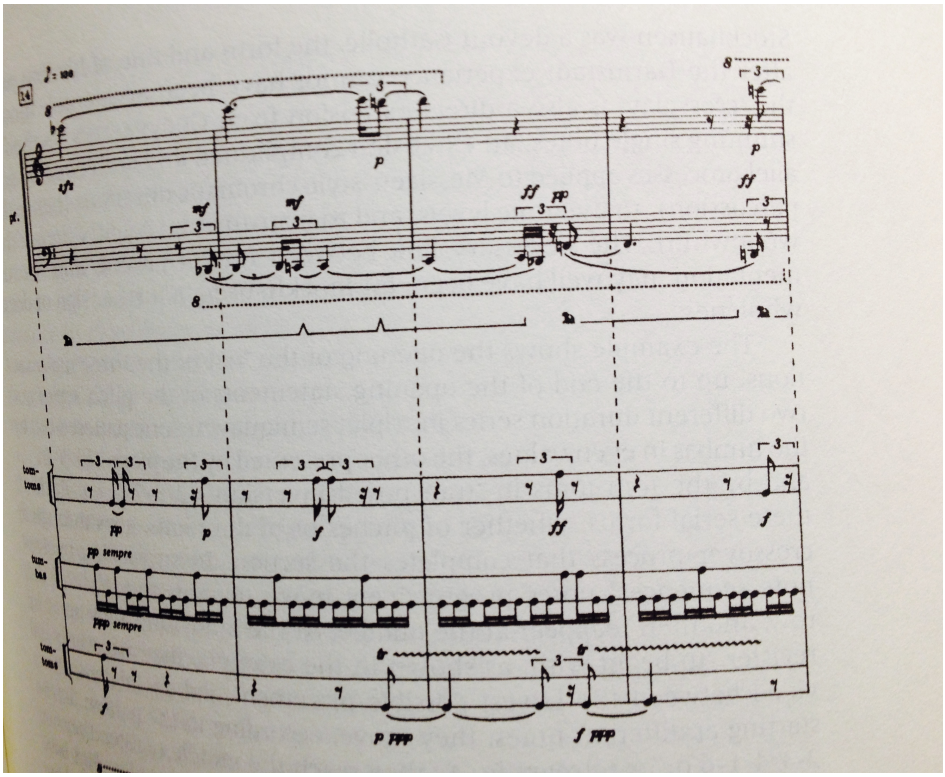


Figure 3.3. Varèse and Stockhausen, Hamburg, 1954.

Figure 3.4. Stockhausen preparing for a concert of *Gesang der Jünglinge*, Cologne, 1958.

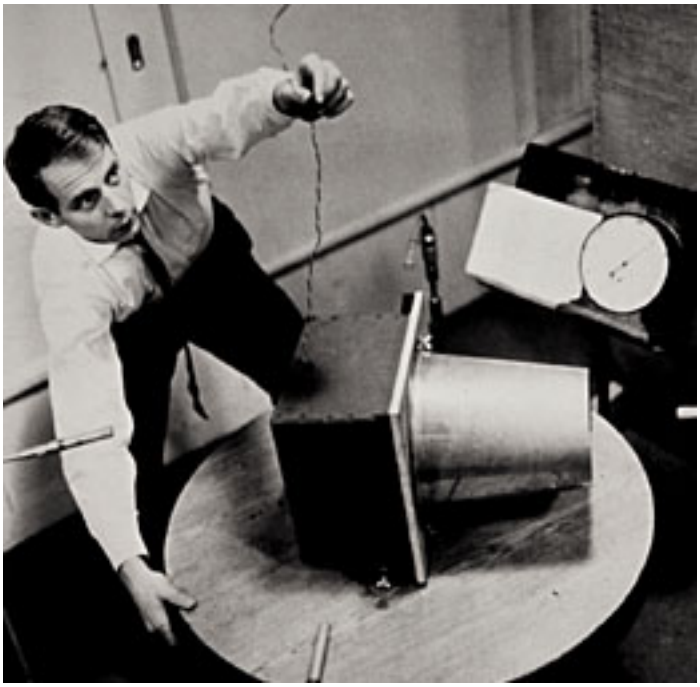
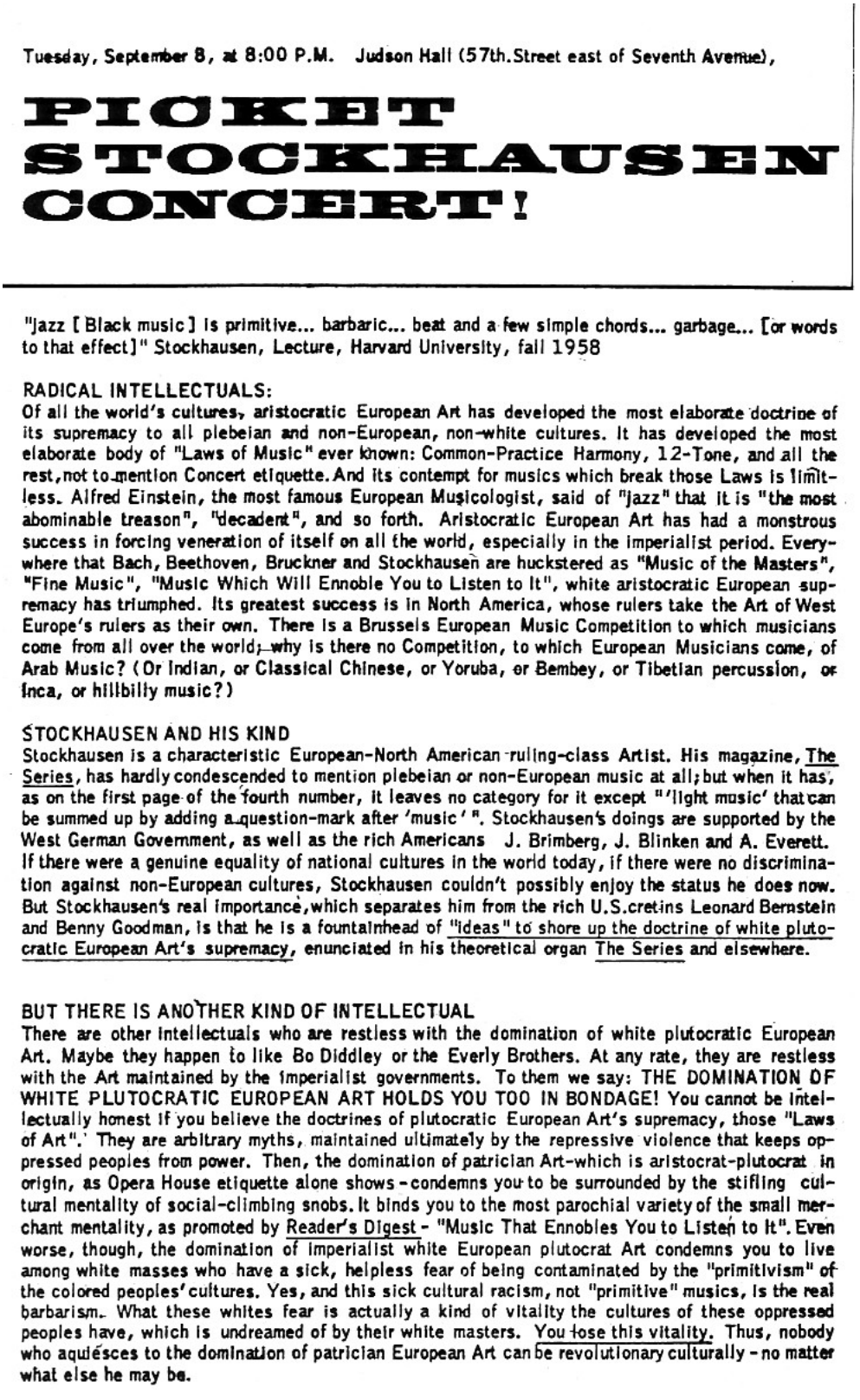


Figure 3.5. Nam June Paik performing in *Originale*, New York, 1964.

Figure 3.6. Performance of *Originale*, New York, 1964.

Figure 3.7. Charlotte Moorman playing cello from the balcony, performance of *Originale*, New York, 1964.

Figure 3.8. Henry Flynt, flyer picketing Stockhausen concert in New York, 1964.



Tuesday, September 8, at 8:00 P.M. Judson Hall (57th. Street east of Seventh Avenue),

PICKET STOCKHAUSEN CONCERT!

"Jazz [Black music] is primitive... barbaric... beat and a few simple chords... garbage... [or words to that effect]" Stockhausen, Lecture, Harvard University, fall 1958

RADICAL INTELLECTUALS:
Of all the world's cultures, aristocratic European Art has developed the most elaborate doctrine of its supremacy to all plebeian and non-European, non-white cultures. It has developed the most elaborate body of "Laws of Music" ever known: Common-Practice Harmony, 12-Tone, and all the rest, not to mention Concert etiquette. And its contempt for musics which break those Laws is limitless. Alfred Einstein, the most famous European Musicologist, said of "jazz" that it is "the most abominable treason", "decadent", and so forth. Aristocratic European Art has had a monstrous success in forcing veneration of itself on all the world, especially in the imperialist period. Everywhere that Bach, Beethoven, Bruckner and Stockhausen are huckstered as "Music of the Masters", "Fine Music", "Music Which Will Ennoble You to Listen to It", white aristocratic European supremacy has triumphed. Its greatest success is in North America, whose rulers take the Art of West Europe's rulers as their own. There is a Brussels European Music Competition to which musicians come from all over the world; why is there no Competition, to which European Musicians come, of Arab Music? (Or Indian, or Classical Chinese, or Yoruba, or Bombey, or Tibetian percussion, or Inca, or hillbilly music?)

STOCKHAUSEN AND HIS KIND
Stockhausen is a characteristic European-North American ruling-class Artist. His magazine, The Series, has hardly condescended to mention plebeian or non-European music at all; but when it has, as on the first page of the fourth number, it leaves no category for it except "'light music' that can be summed up by adding a question-mark after 'music'". Stockhausen's doings are supported by the West German Government, as well as the rich Americans J. Brimberg, J. Blinken and A. Everett. If there were a genuine equality of national cultures in the world today, if there were no discrimination against non-European cultures, Stockhausen couldn't possibly enjoy the status he does now. But Stockhausen's real importance, which separates him from the rich U.S. cretins Leonard Bernstein and Benny Goodman, is that he is a fountainhead of "ideas" to shore up the doctrine of white plutocratic European Art's supremacy, enunciated in his theoretical organ The Series and elsewhere.

BUT THERE IS ANOTHER KIND OF INTELLECTUAL
There are other intellectuals who are restless with the domination of white plutocratic European Art. Maybe they happen to like Bo Diddley or the Everly Brothers. At any rate, they are restless with the Art maintained by the imperialist governments. To them we say: THE DOMINATION OF WHITE PLUTOCRATIC EUROPEAN ART HOLDS YOU TOO IN BONDAGE! You cannot be intellectually honest if you believe the doctrines of plutocratic European Art's supremacy, those "Laws of Art". They are arbitrary myths, maintained ultimately by the repressive violence that keeps oppressed peoples from power. Then, the domination of patrician Art-which is aristocrat-plutocrat in origin, as Opera House etiquette alone shows - condemns you to be surrounded by the stifling cultural mentality of social-climbing snobs. It binds you to the most parochial variety of the small merchant mentality, as promoted by Reader's Digest - "Music That Ennobles You to Listen to It". Even worse, though, the domination of imperialist white European plutocrat Art condemns you to live among white masses who have a sick, helpless fear of being contaminated by the "primitivism" of the colored peoples' cultures. Yes, and this sick cultural racism, not "primitive" musics, is the real barbarism. What these whites fear is actually a kind of vitality the cultures of these oppressed peoples have, which is undreamed of by their white masters. You lose this vitality. Thus, nobody who aquiesces to the domination of patrician European Art can be revolutionary culturally - no matter what else he may be.

Figure 3.9. Protesters picketing a Stockhausen concert in New York, 1964.

Figure 3.10. Photo of Stockhausen, ca. 1950s.

Figure 3.11. The Beatles, album cover of *Sgt. Pepper's Lonely Hearts Club Band*, 1967 (Stockhausen: top row, fifth from the left).

Figure 3.12. Paul Klee, *Alter Klang*, 1925. Oil on cardboard, 38 x 38 cm, Collection of the Kunstmuseum Basel.

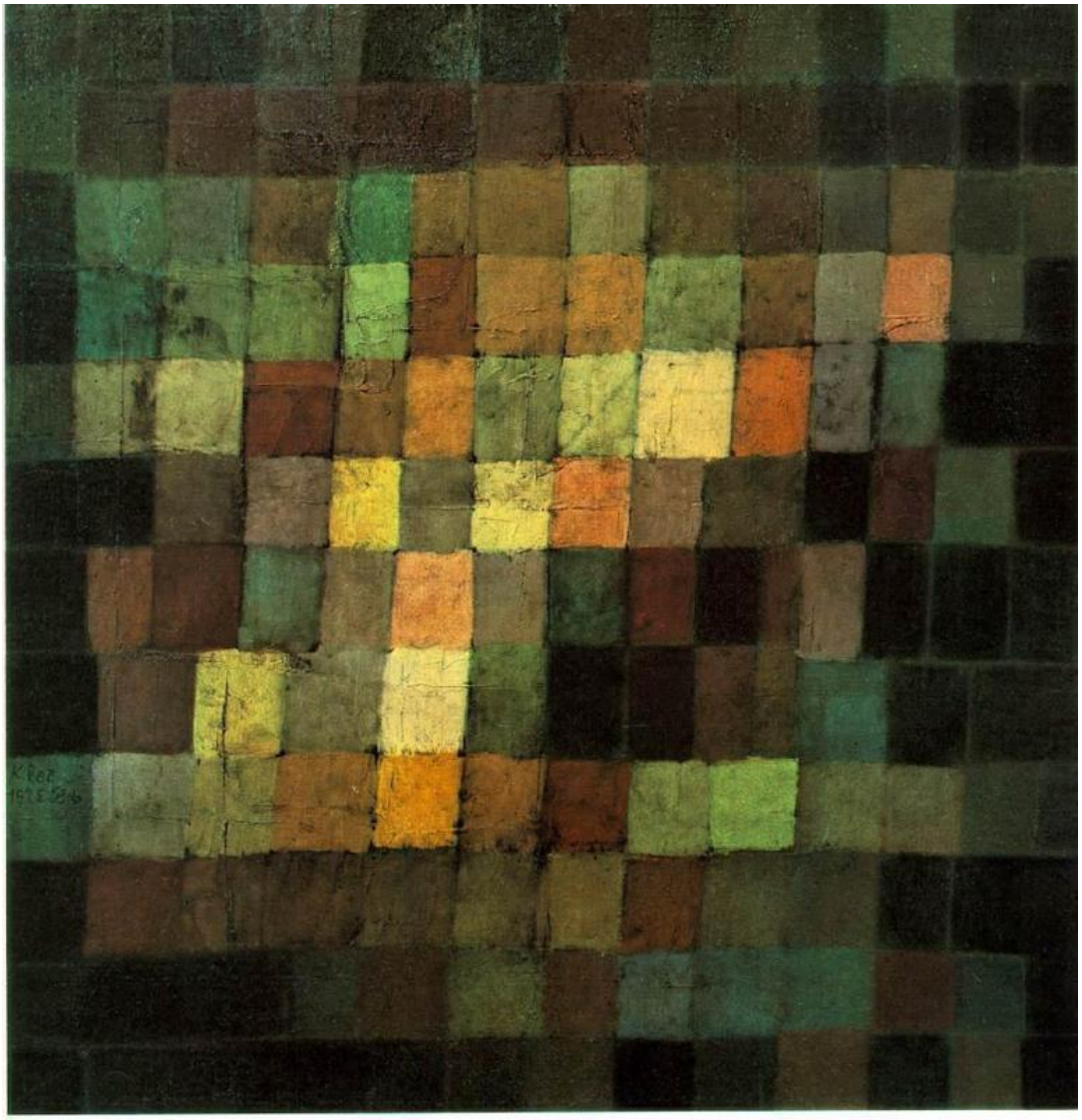


Figure 3.13. John Cage, score for *Water Walk*, 1959.

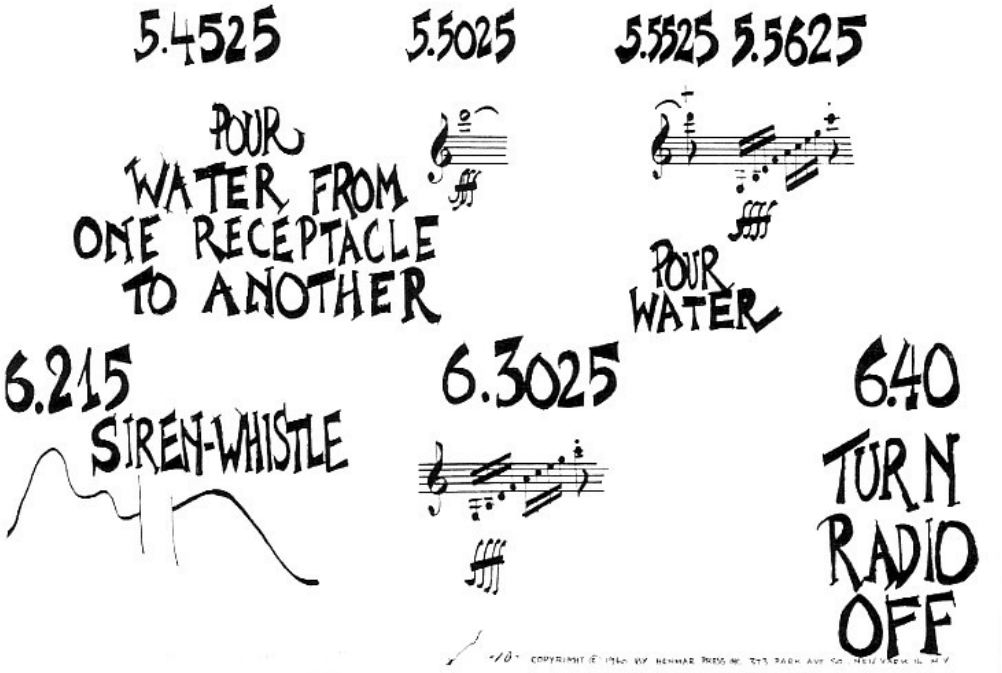


Figure 3.14. Stockhausen controlling the music in the West German Pavilion, World's Fair, Osaka, 1970.

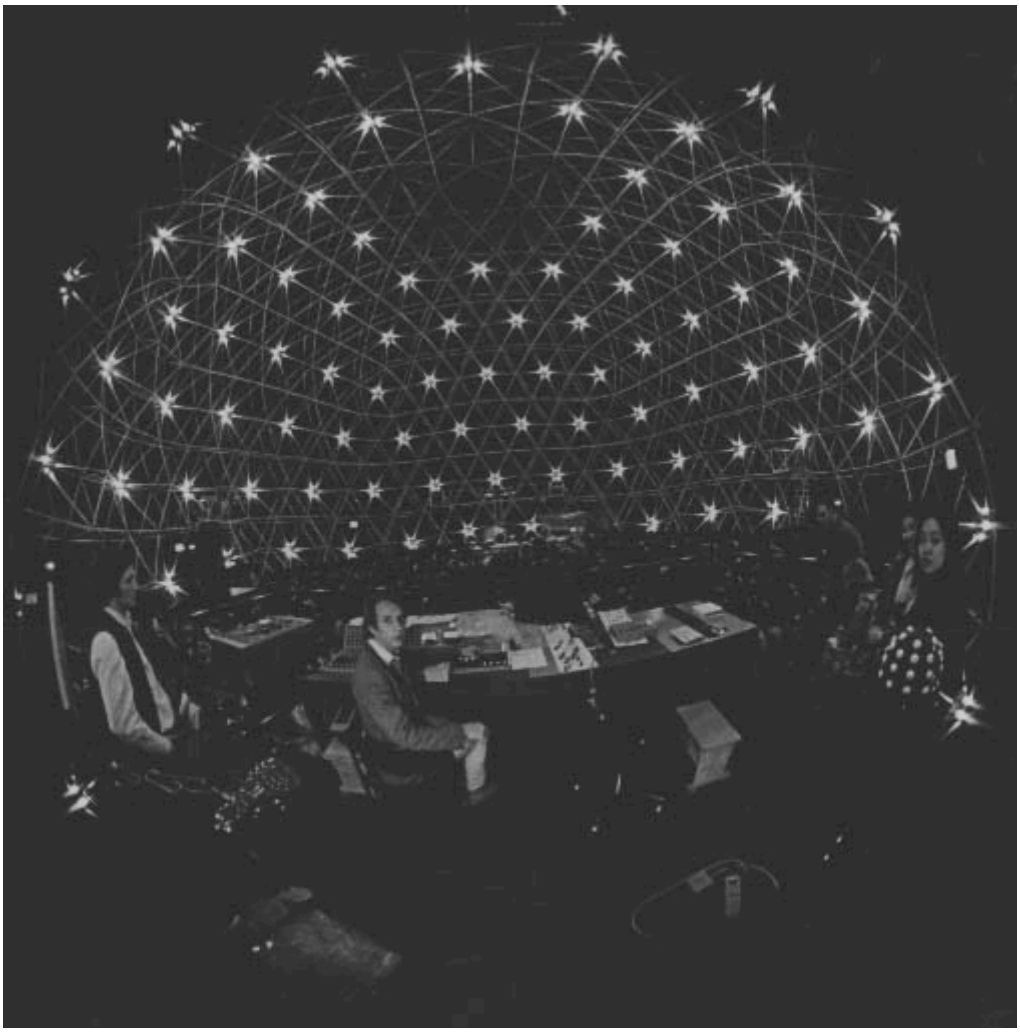


Figure 3.15. Diagram for Amancio Williams's "Space Theatre," ca. 1940s.

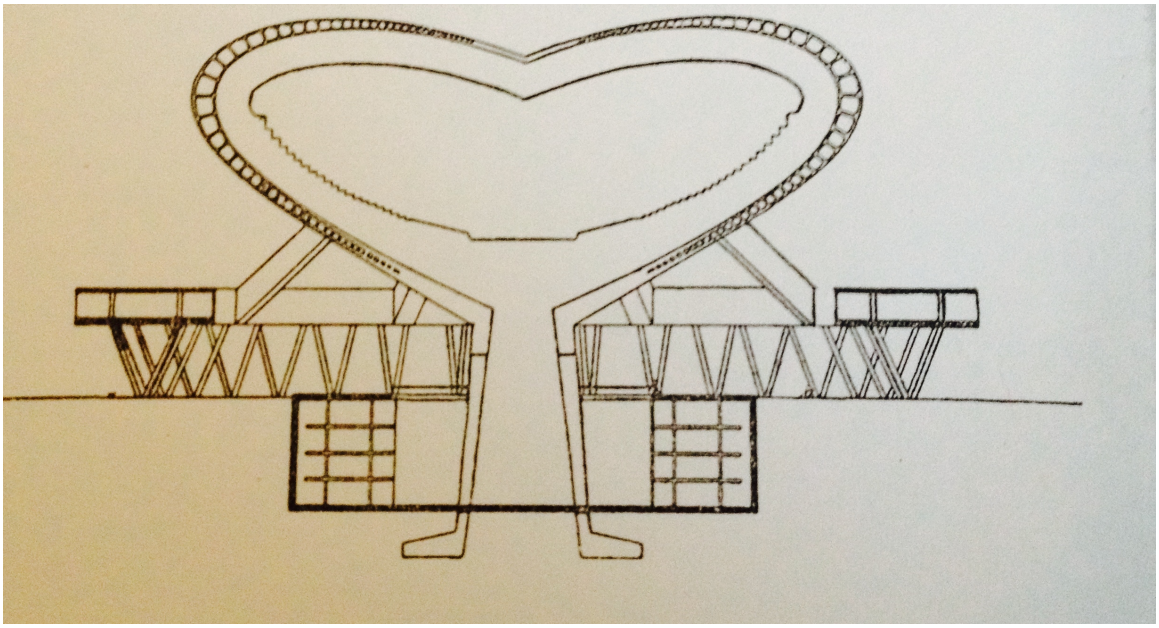


Figure 3.16. John Whitney, sequenced filmstrip, 1940s.

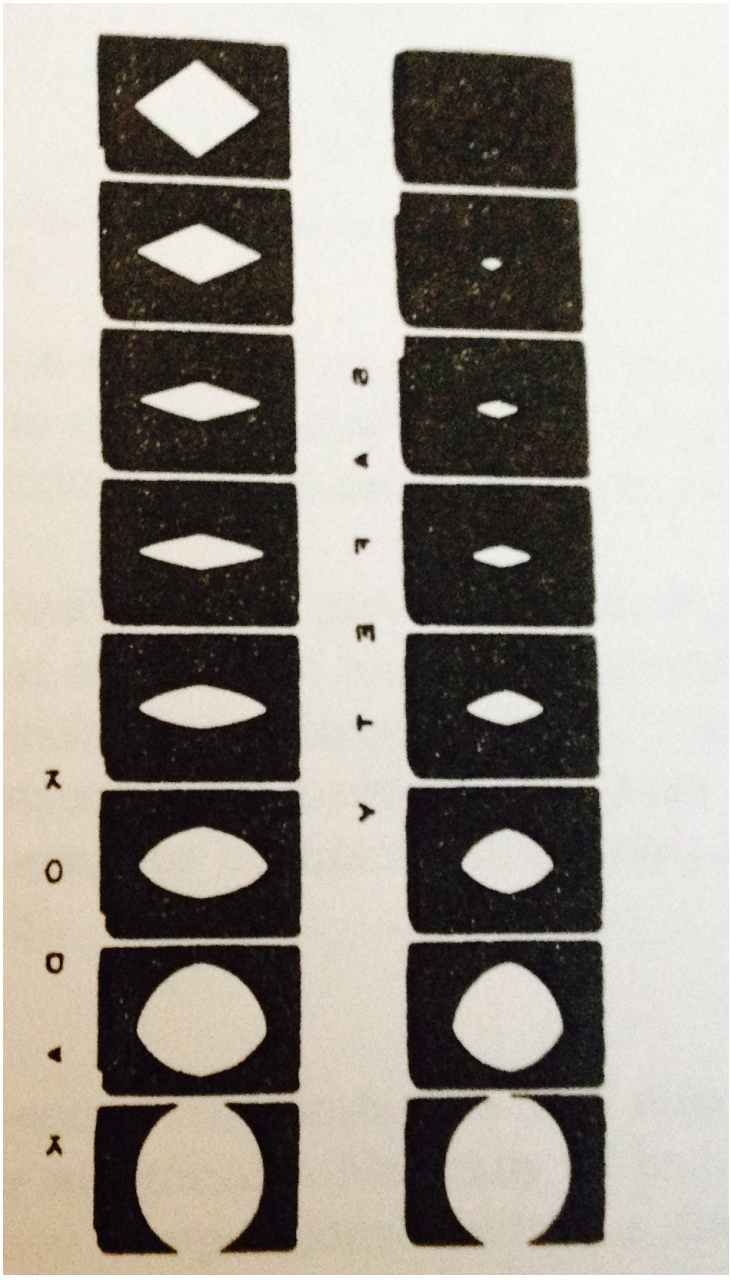


Figure 3.17. Sol LeWitt, *Serial Project Number 1 (ABCD),* 1966. Steel, enamel, and baked aluminum; 20 x 163 x 163 in., Collection of the Museum of Modern Art, New York.

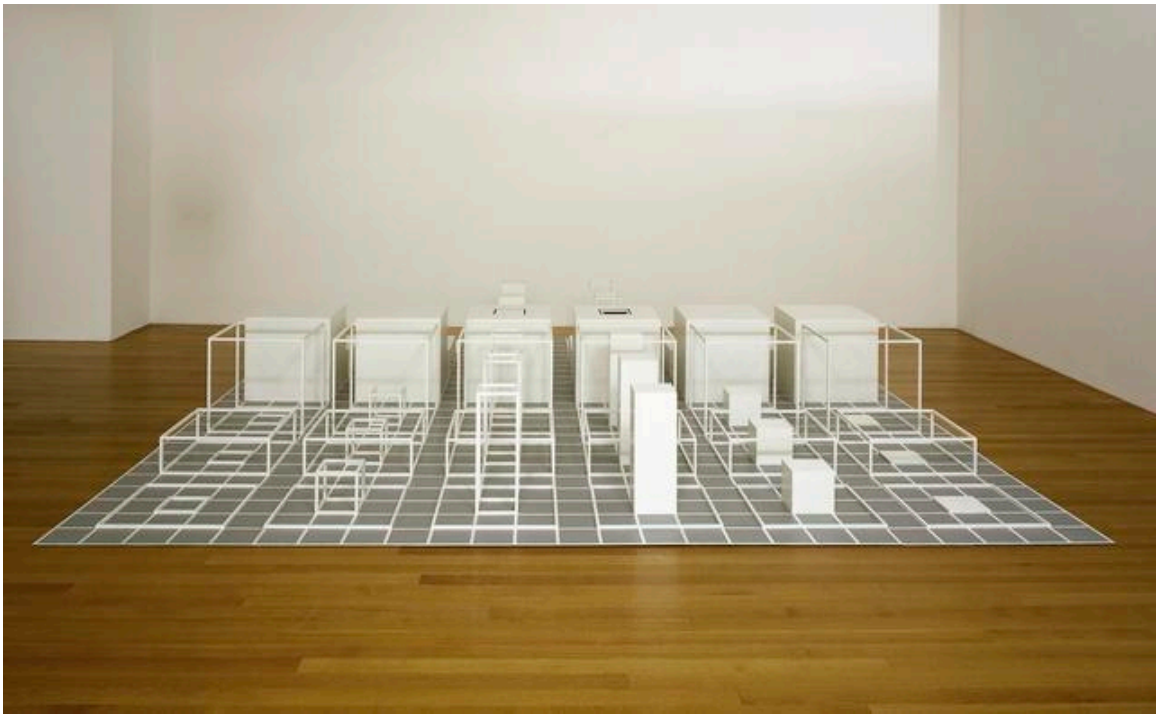


Figure 3.18. Sol LeWitt, *Wall Drawing #11*, 1969.

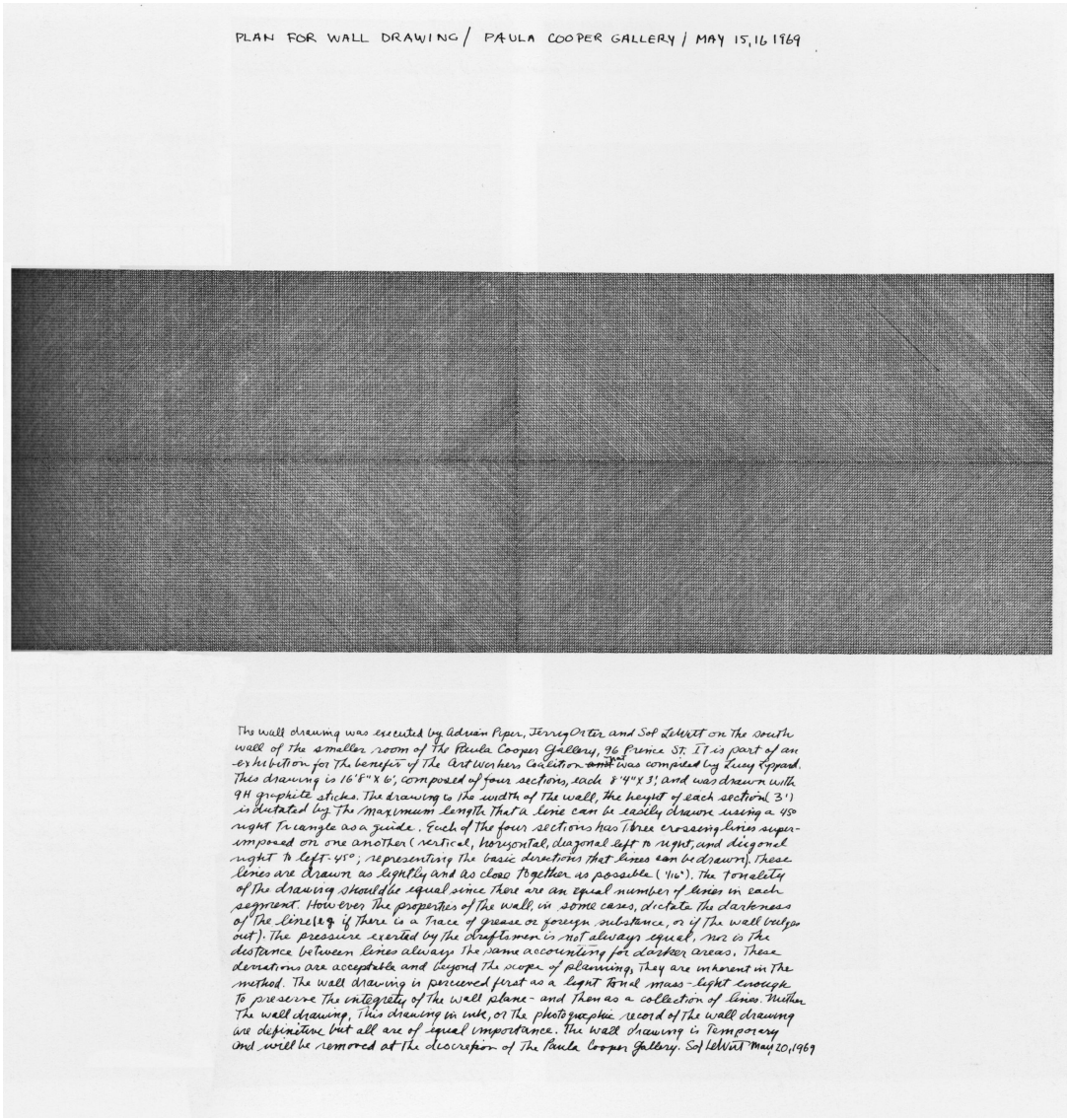


Figure 3.19. Sol LeWitt, page from *Autobiography*, 1980, with labeled cassettes and records by Mozart, Bartók, Reich, and Glass.

Figure 3.20. Sol LeWitt, *Run IV*, 1962. Oil and canvas and painted wood, 63 ½ x 63 ½ x 3 ½ in., LeWitt Collection, Chester, CT.

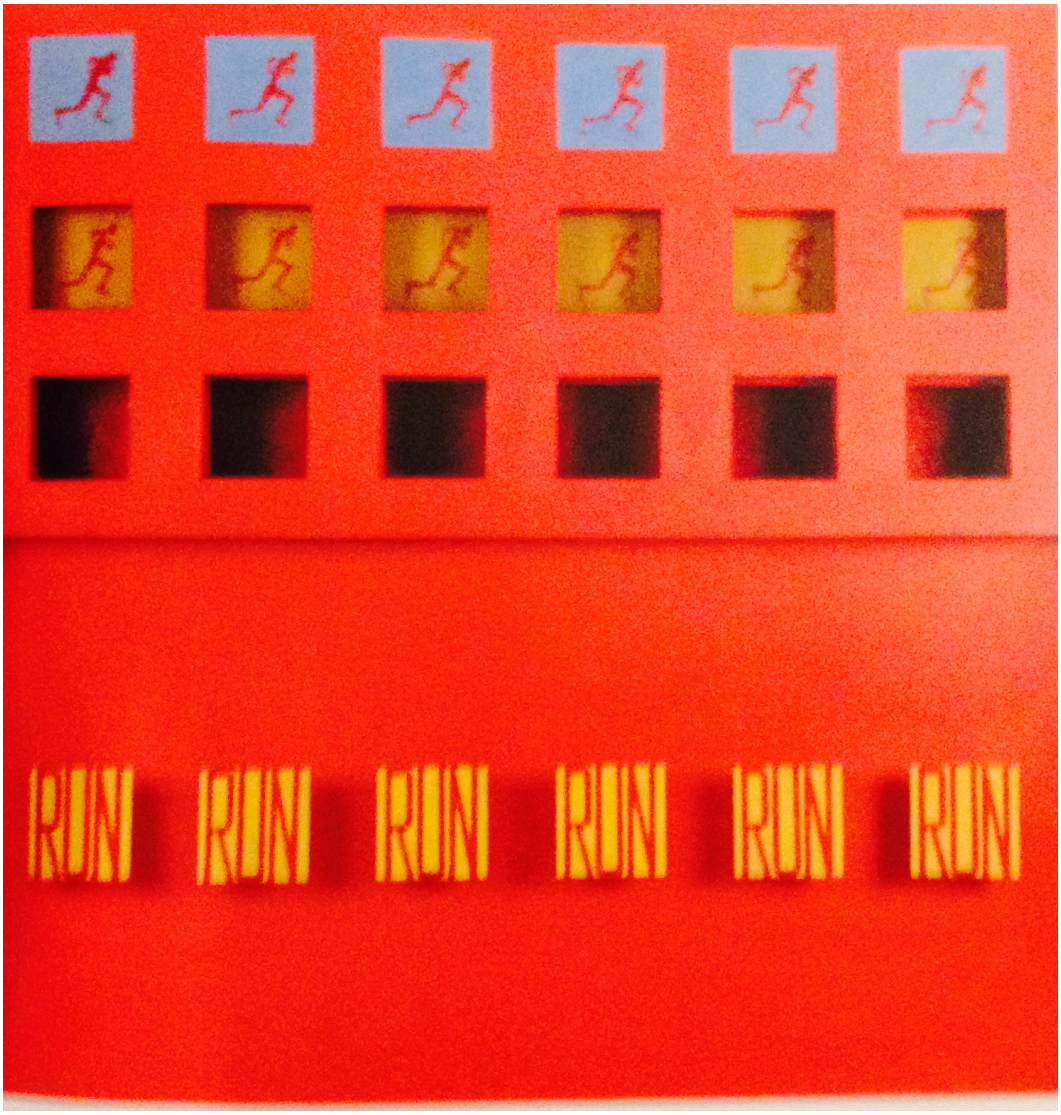


Figure 3.21. Sol LeWitt, *From all Three-Part Variations on Three Different Kinds of Cubes*, 1967-1969. Painted polystyrene, six parts, Each 12 x 4 x 4 in. (30.5 x 10.2 x 10.2 cm), on polystyrene strip, 44 x 4 in. (111.8 x 10.2 cm), on wooden base, 3/4 x 52 x 11 7/8 in. (1.9 x 132.1 x 30.2 cm); overall, 12 3/4 x 52 x 11 7/8 in. (32.5 x 132.1 x 30.2 cm), Collection the Museum of Modern Art, New York.

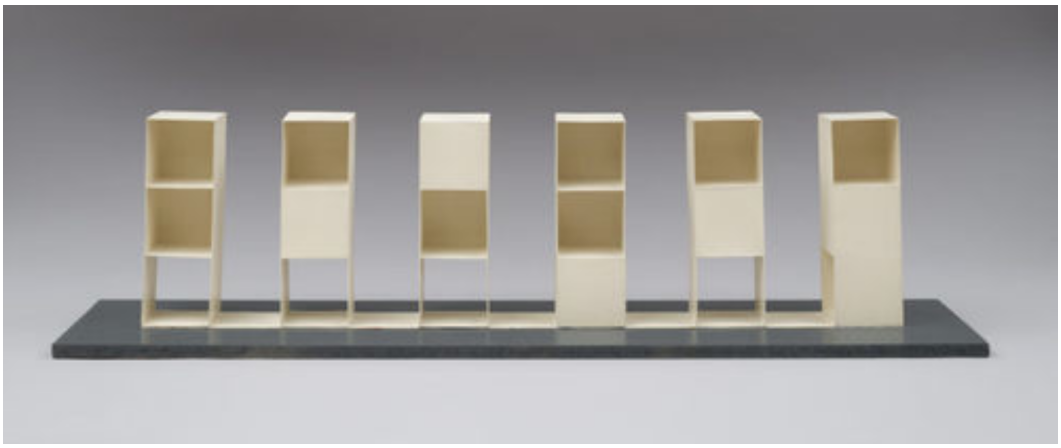


Figure 3.22. Sol LeWitt, Floor Structure Black, 1965. Painted wood, 18 1/2 x 18 x 82 in. (47 x 45.7 x 208.3 cm), Collection of the National Gallery of Art, Washington, DC.

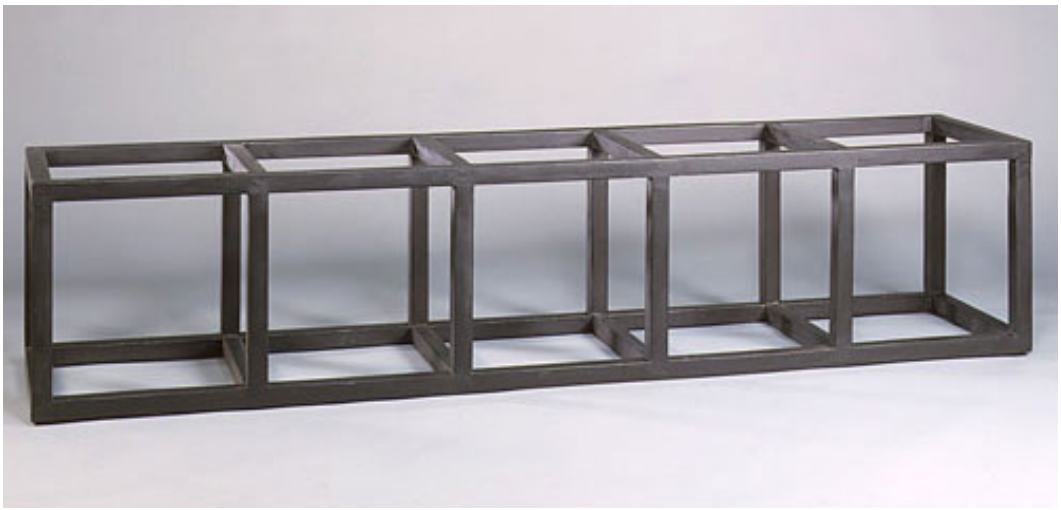
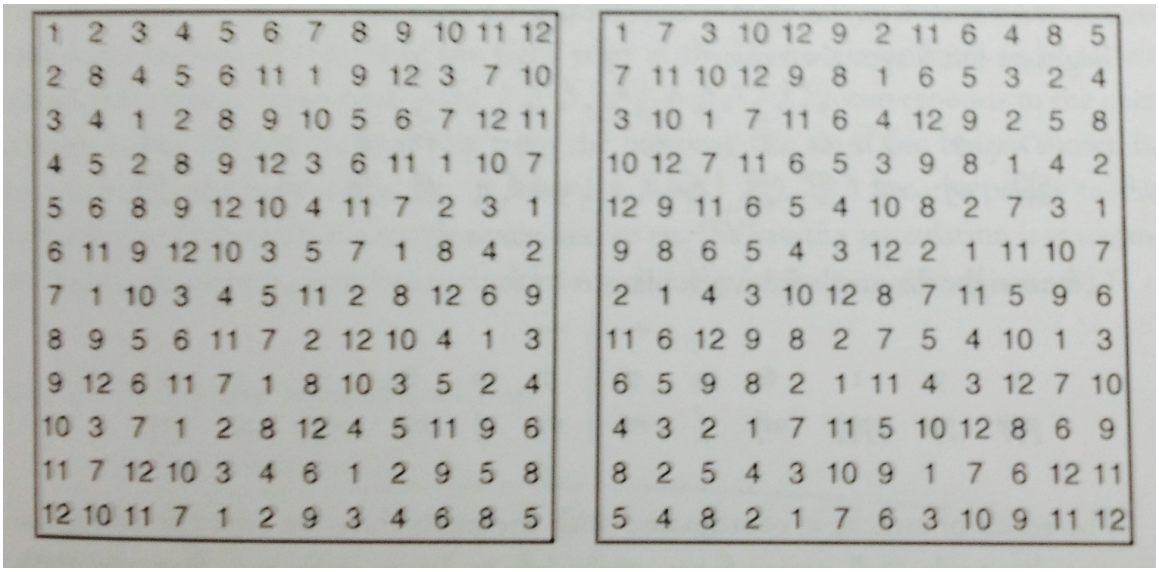


Figure 3.23. Pierre Boulez, “O” and “I” matrices for *Structures Ia*, 1951.



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3	4	1	2	8	9	10	5	6	7	12	11
4	5	2	8	9	12	3	6	11	1	10	7
5	6	8	9	12	10	4	11	7	2	3	1
6	11	9	12	10	3	5	7	1	8	4	2
7	1	10	3	4	5	11	2	8	12	6	9
8	9	5	6	11	7	2	12	10	4	1	3
9	12	6	11	7	1	8	10	3	5	2	4
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11	7	12	10	3	4	6	1	2	9	5	8
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1	7	3	10	12	9	2	11	6	4	8	5
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11	6	12	9	8	2	7	5	4	10	1	3
6	5	9	8	2	1	11	4	3	12	7	10
4	3	2	1	7	11	5	10	12	8	6	9
8	2	5	4	3	10	9	1	7	6	12	11
5	4	8	2	1	7	6	3	10	9	11	12

Figure 4.1. Takis, *Signal*, 1955.

Figure 4.2. Takis, *Electromagnetic Musical Sculpture*, 1965

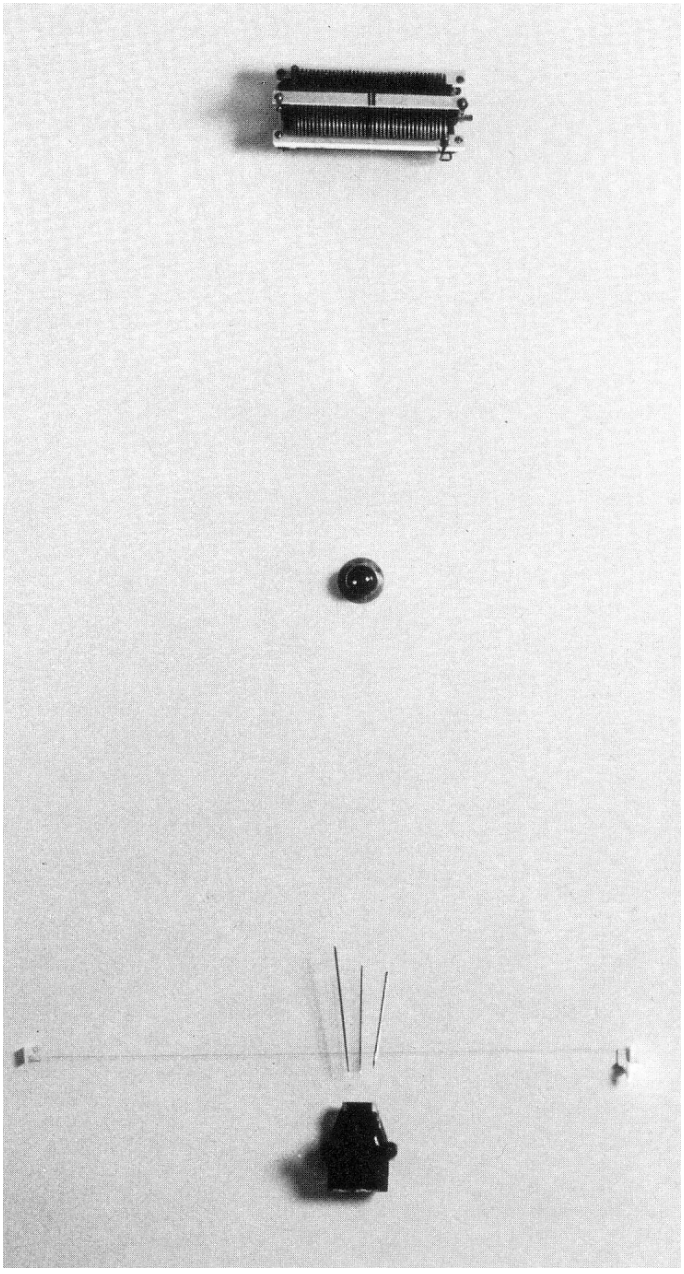


Figure 4.3. Sinclair Beiles as *L'Impossible: Un Homme dans l'espace*, Galerie Iris Clert, Paris, 1960.

Figure 4.4. Takis and Earle Brown, *Bruit de Vide* (*Sound of Void* or *Noise of Void*), 1963.

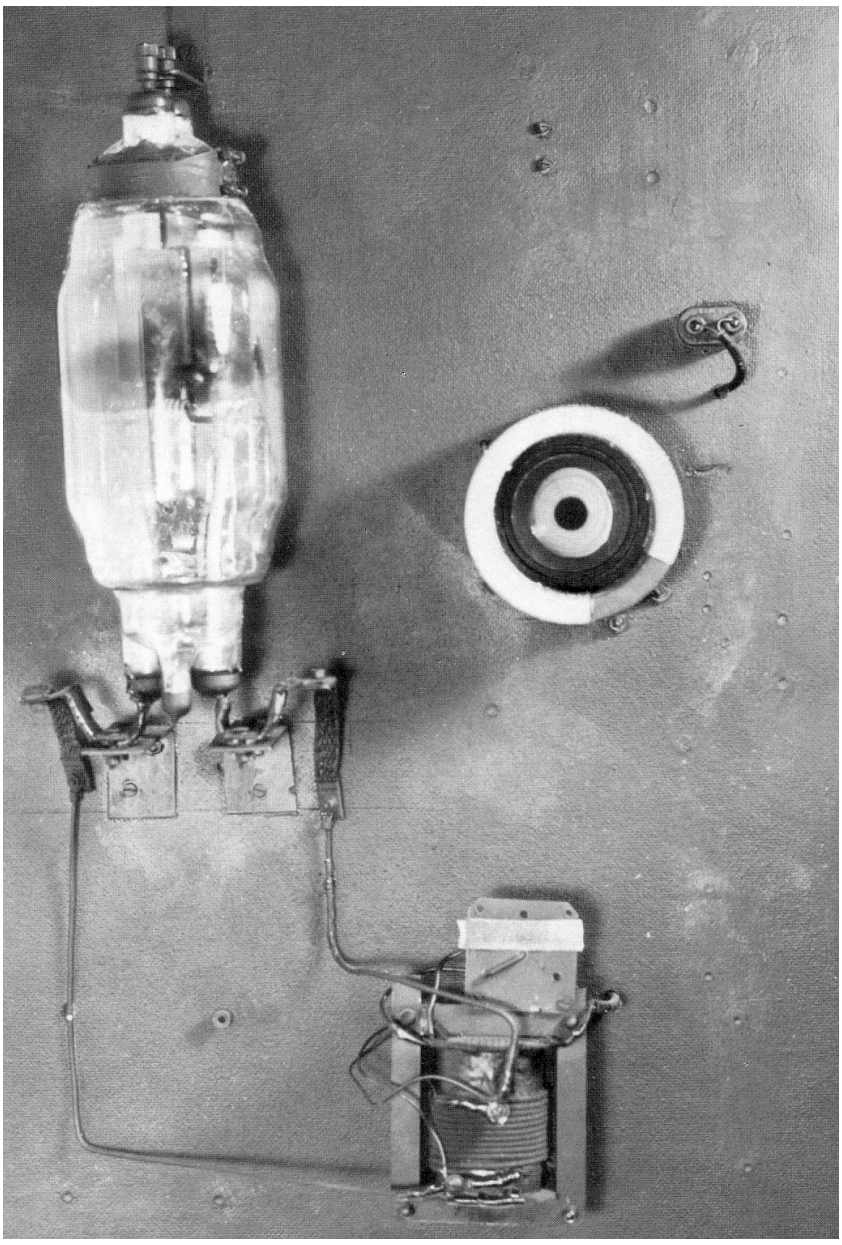


Figure 4.5. Pythagorean monochord with string, sounding box, and moveable bridge.

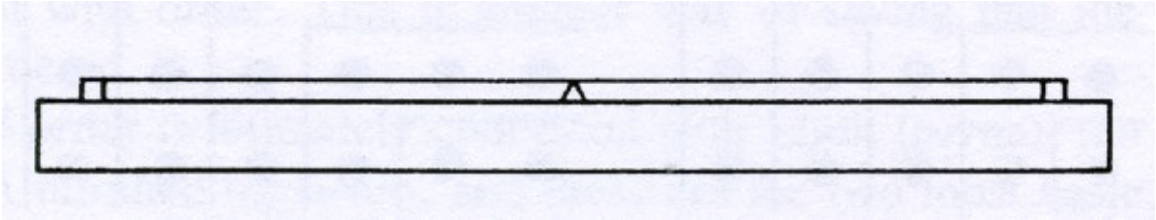


Figure 4.6. Alberto Giacometti, *Walking Man II*, 1960. Collection of the Art Institute of Chicago.

Figure 4.7. Takis, *Oedipe et Antigone* (*Oedipus and Antigone*), 1954.

Figure 4.8. Takis, *Ikaros* (*Icarus*), 1954.

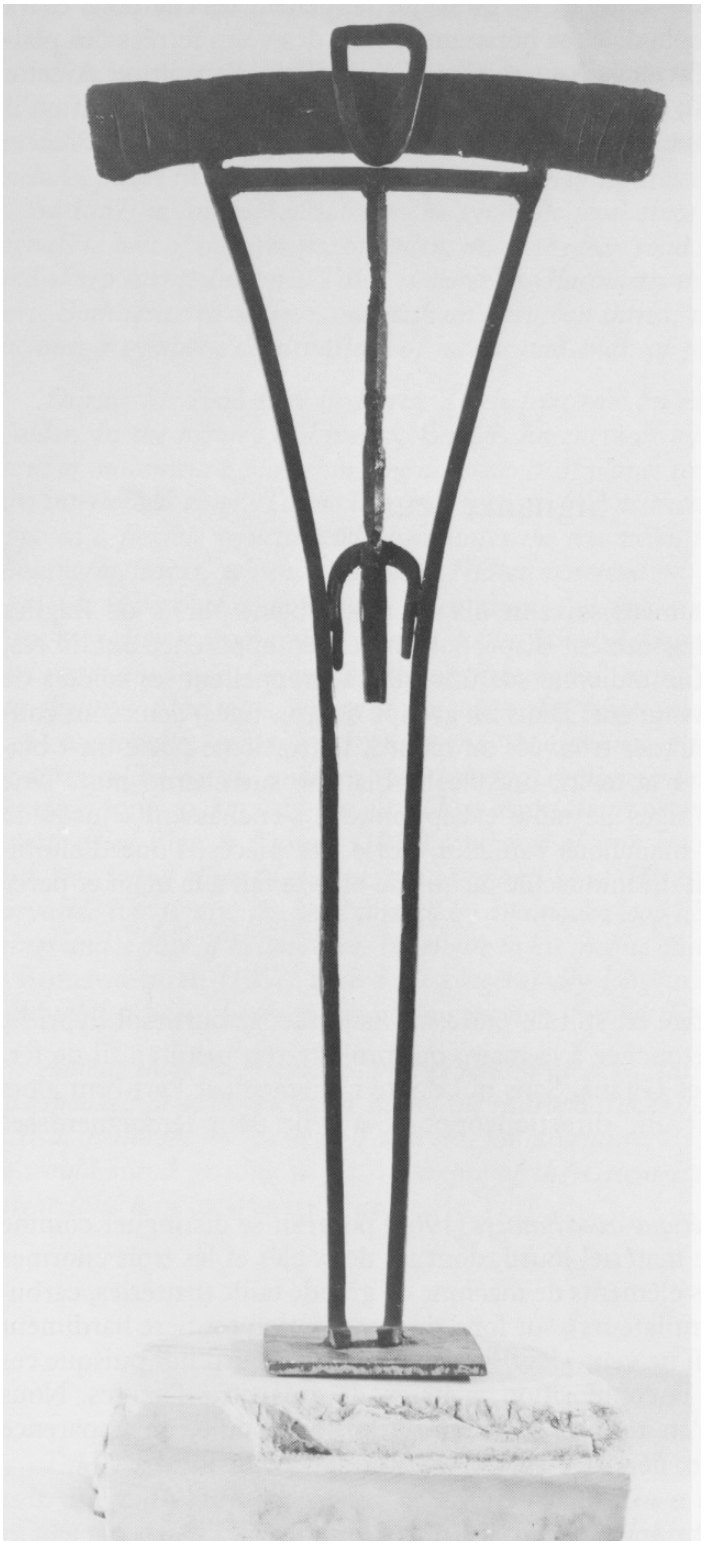


Figure 4.9. Takis, *Seated Goddess*, 1954 or 1955. The Menil Collection, Houston.

Figure 4.10. Takis, *Signal*, 1959.

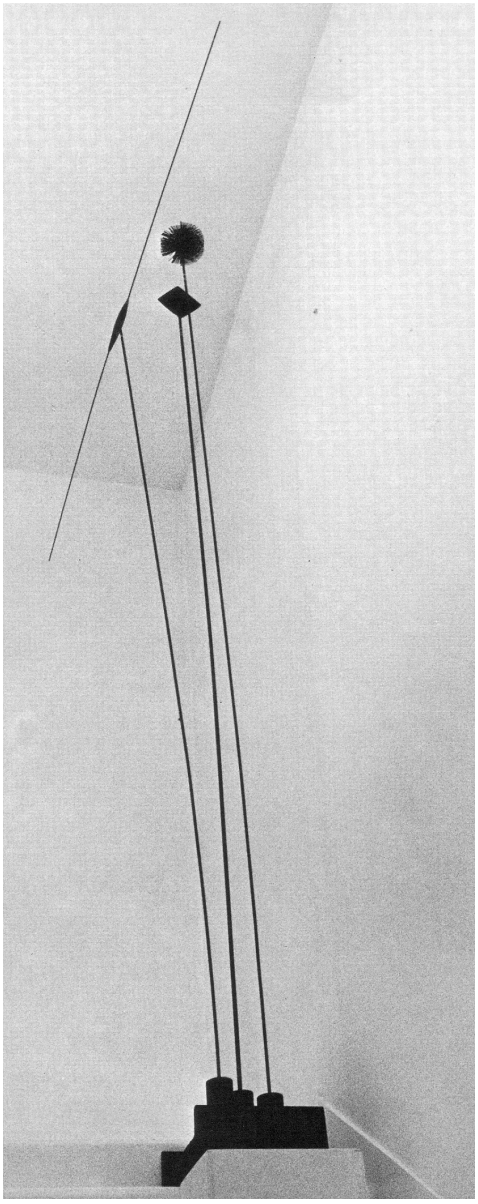


Figure 4.11. Takis with *White Signals*, Indica Gallery, London, 1966.

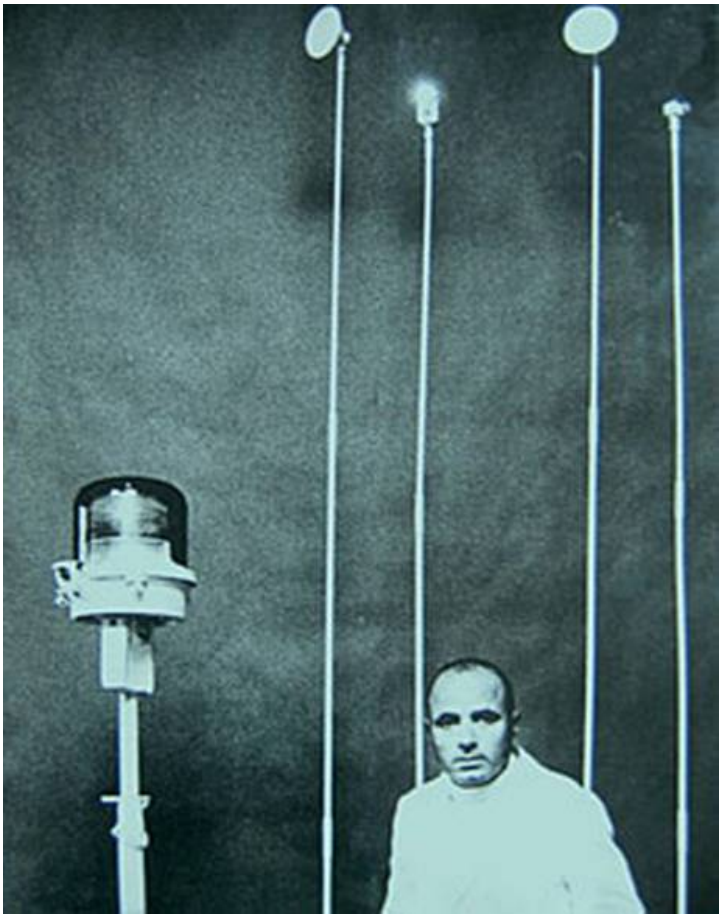


Figure 4.12. Alexander Calder, *Snow Flurry, I*, 1948.

Figure 4.13. “Le Mouvement,” Paris, Galerie Denise René, 1955. Works by Marcel Duchamp, Alexander Calder, Jean Tinguely, and Agam.

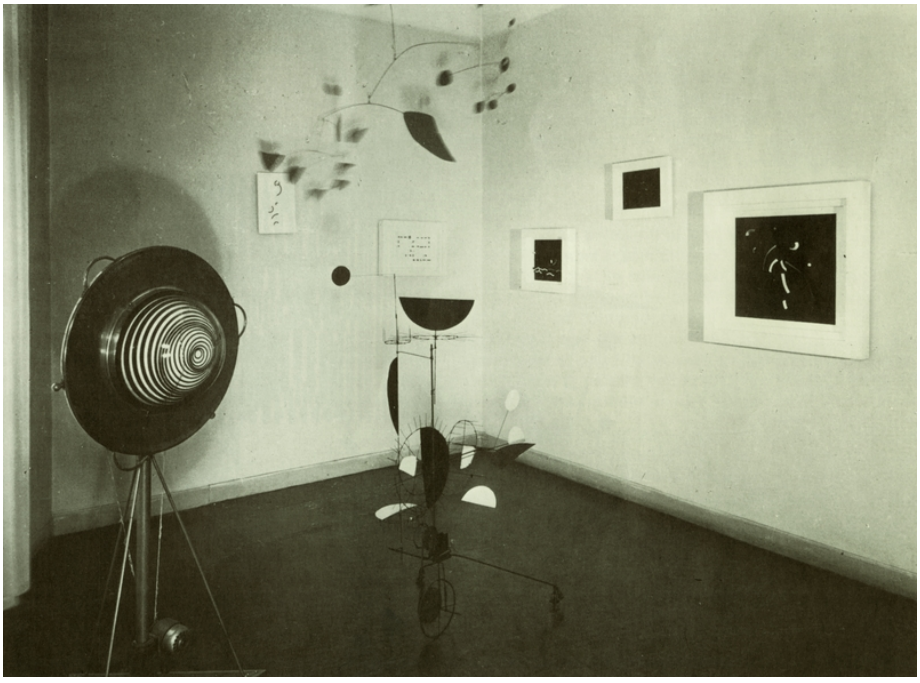


Figure 4.14. Takis in the iron forge, Rue Odessa, Paris, 1959.

Figure 4.15. Takis, note for a *Signal*, 1964.

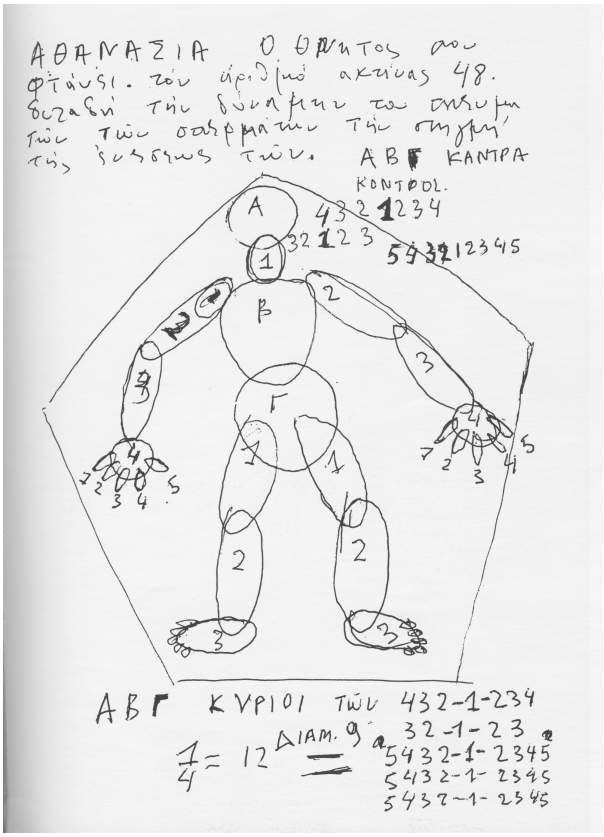


Figure 4.16. Takis, *Système de Radar Magnétique*, 1959.

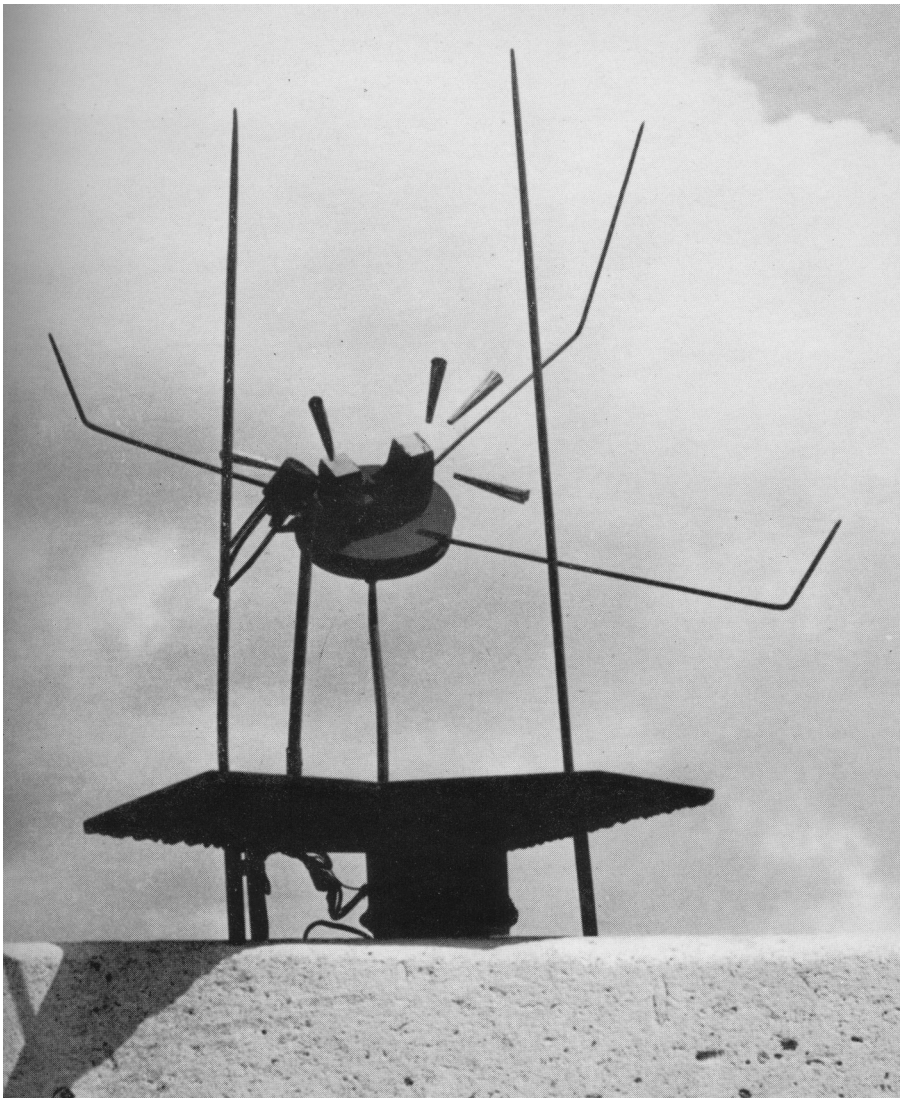


Figure 4.17. Yves Klein, *Leap into the Void*, 1960.

Figure 4.18. Photos of *L'Impossible: Un homme dans l'espace*, Galerie Iris Clert, Paris, 1960.

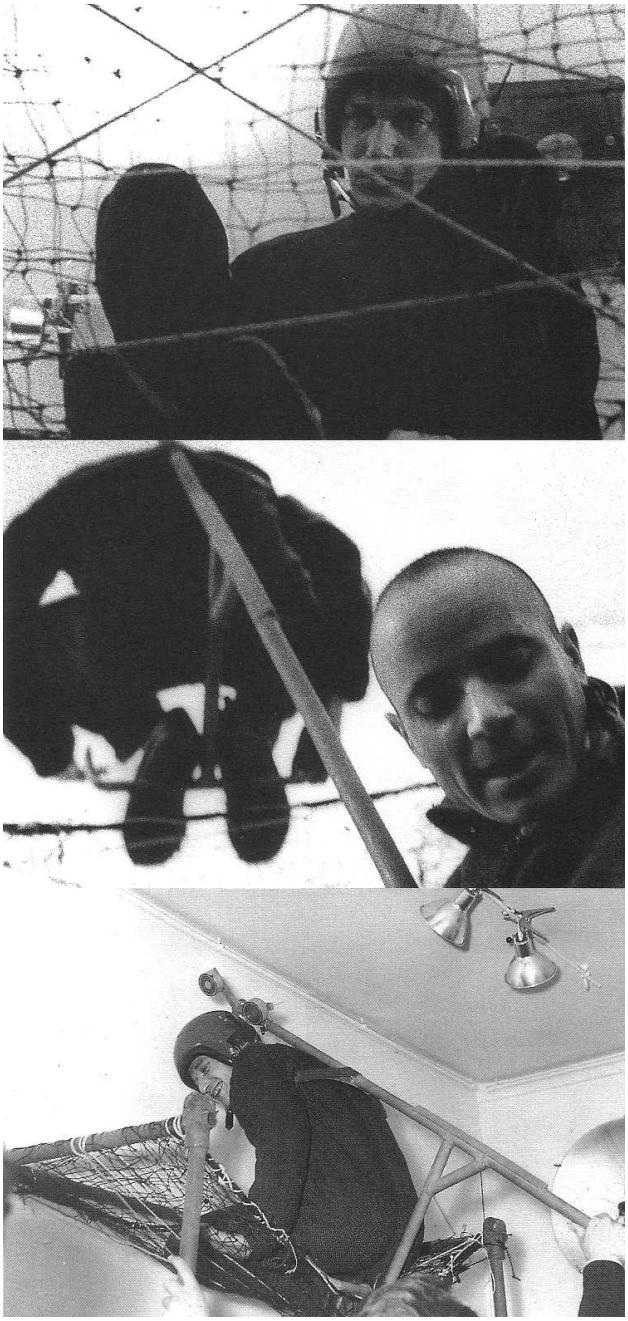
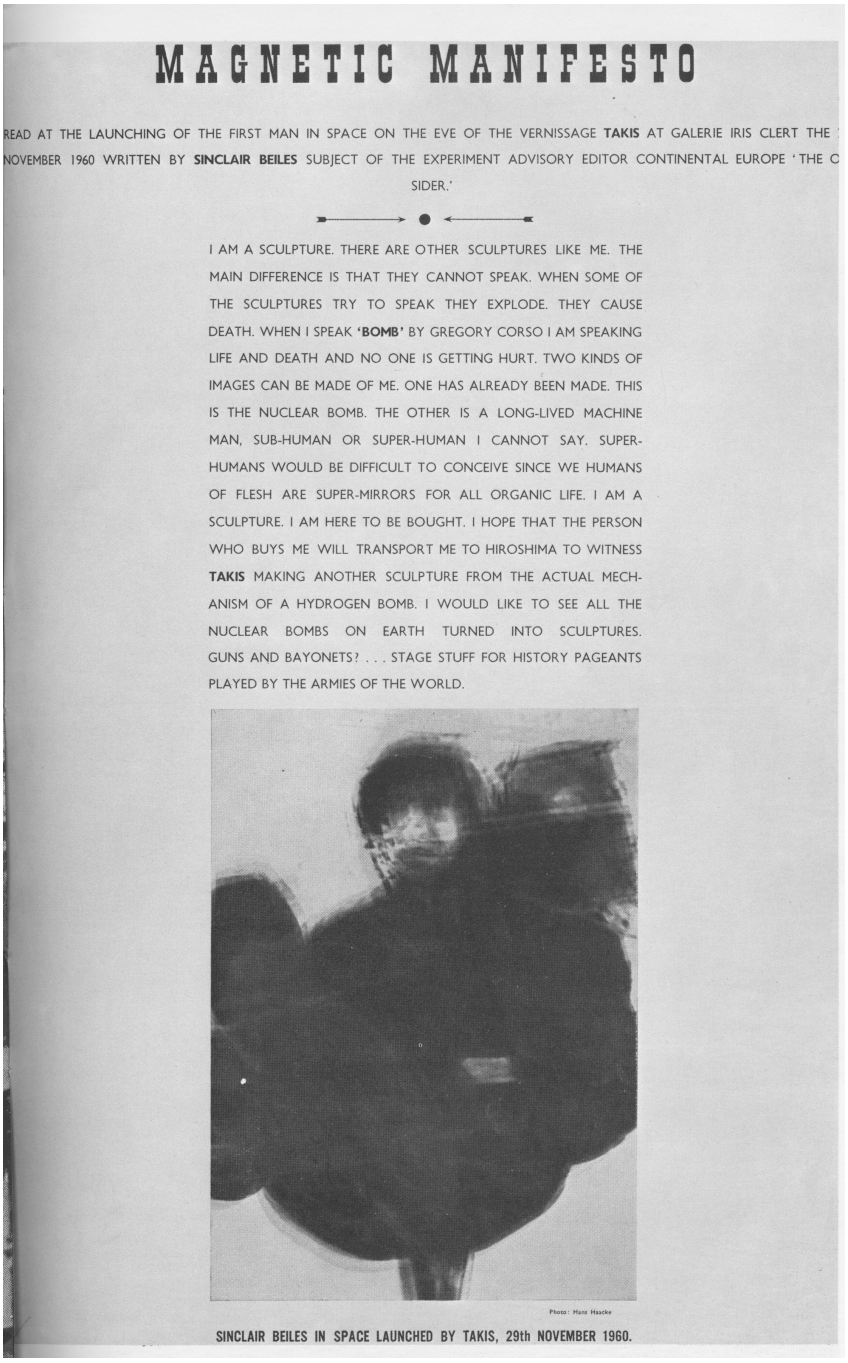


Figure 4.19. Sinclair Beiles, *Magnetic Manifesto*, 1960.



MAGNETIC MANIFESTO

READ AT THE LAUNCHING OF THE FIRST MAN IN SPACE ON THE EVE OF THE VERNISSAGE **TAKIS** AT GALERIE IRIS CLERT THE NOVEMBER 1960 WRITTEN BY **SINCLAIR BEILES** SUBJECT OF THE EXPERIMENT ADVISORY EDITOR CONTINENTAL EUROPE 'THE C SIDER.'

I AM A SCULPTURE. THERE ARE OTHER SCULPTURES LIKE ME. THE MAIN DIFFERENCE IS THAT THEY CANNOT SPEAK. WHEN SOME OF THE SCULPTURES TRY TO SPEAK THEY EXPLODE. THEY CAUSE DEATH. WHEN I SPEAK **'BOMB'** BY GREGORY CORSO I AM SPEAKING LIFE AND DEATH AND NO ONE IS GETTING HURT. TWO KINDS OF IMAGES CAN BE MADE OF ME. ONE HAS ALREADY BEEN MADE. THIS IS THE NUCLEAR BOMB. THE OTHER IS A LONG-LIVED MACHINE MAN, SUB-HUMAN OR SUPER-HUMAN I CANNOT SAY. SUPER-HUMANS WOULD BE DIFFICULT TO CONCEIVE SINCE WE HUMANS OF FLESH ARE SUPER-MIRRORS FOR ALL ORGANIC LIFE. I AM A SCULPTURE. I AM HERE TO BE BOUGHT. I HOPE THAT THE PERSON WHO BUYS ME WILL TRANSPORT ME TO HIROSHIMA TO WITNESS **TAKIS** MAKING ANOTHER SCULPTURE FROM THE ACTUAL MECHANISM OF A HYDROGEN BOMB. I WOULD LIKE TO SEE ALL THE NUCLEAR BOMBS ON EARTH TURNED INTO SCULPTURES. GUNS AND BAYONETS? . . . STAGE STUFF FOR HISTORY PAGEANTS PLAYED BY THE ARMIES OF THE WORLD.

Photo: Hans Haacke

SINCLAIR BEILES IN SPACE LAUNCHED BY TAKIS, 29th NOVEMBER 1960.

Figure 4.20. Piet Mondrian, *Composition in Line*, 1917.

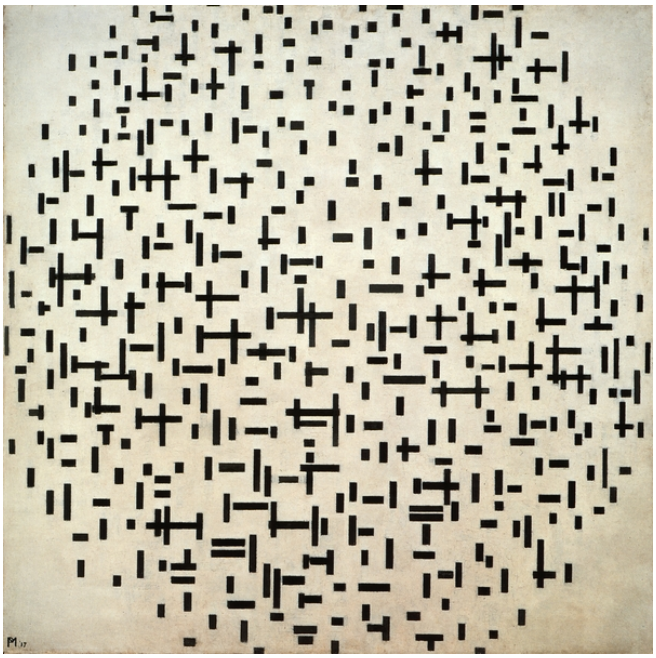


Figure 4.21. Takis, *Télélumière II*, 1963.

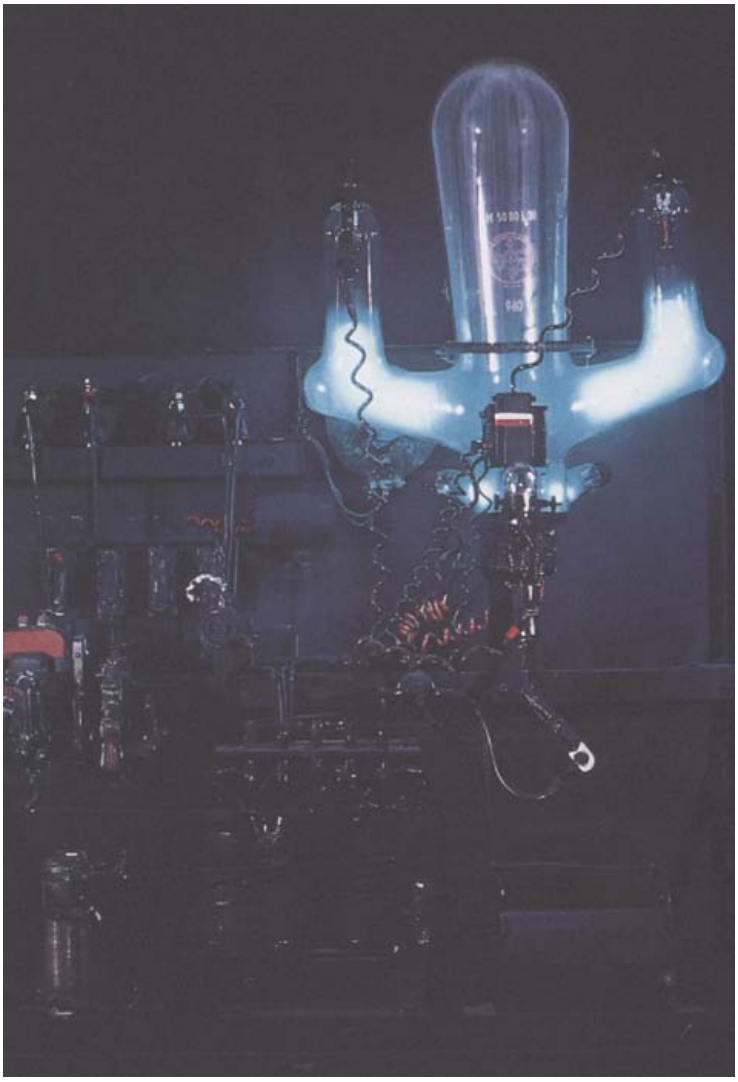


Figure 4.22. Robert Rauschenberg and Billy Klüver, *Dry Cell*, 1963.

Figure 4.23. Marcel Duchamp, *With Hidden Noise*, 1916.

Figure 4.24. Takis, *Télésculpture Musicale* (*Musical Sculpture)*, 1965.

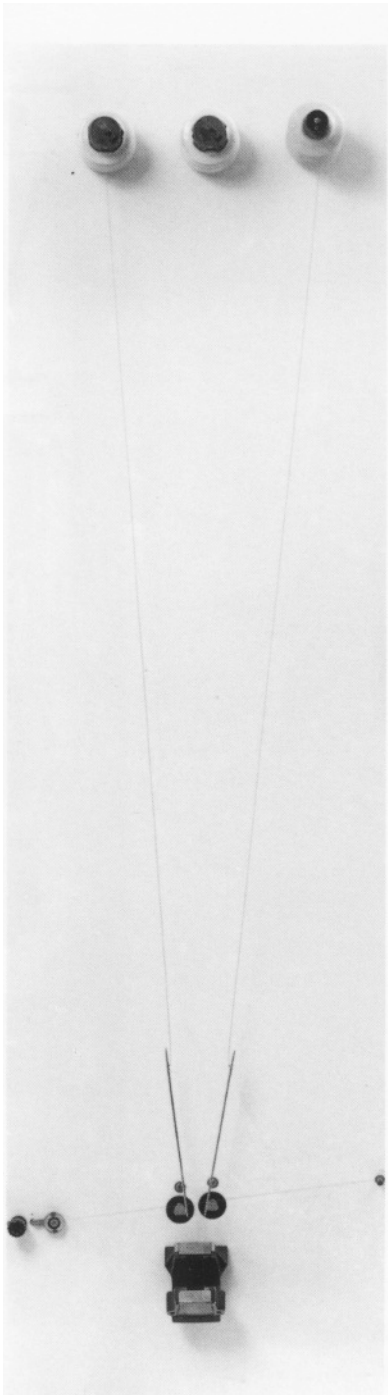


Figure 4.25. Takis, design for a *Musical Sculpture*, 1967.

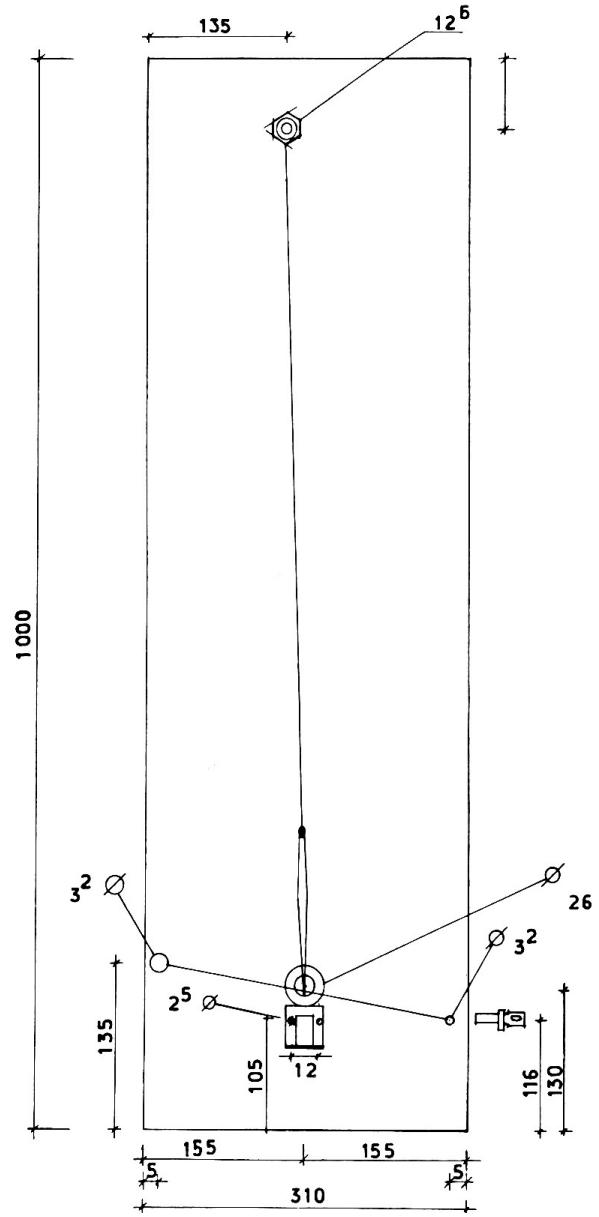


Figure 4.26. Takis, detail of a *Musical Sculpture*, 1966.

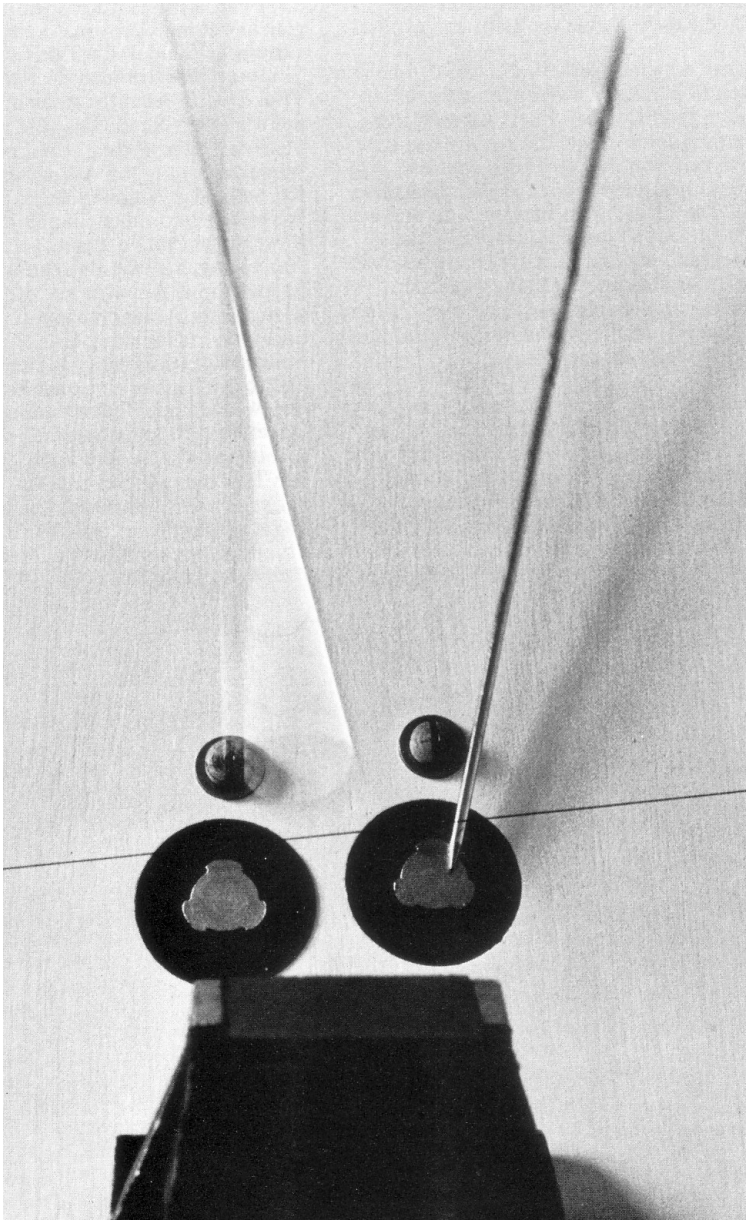


Figure 4.27. Takis, *Telemagnetic Musical Sculpture*, 1966.

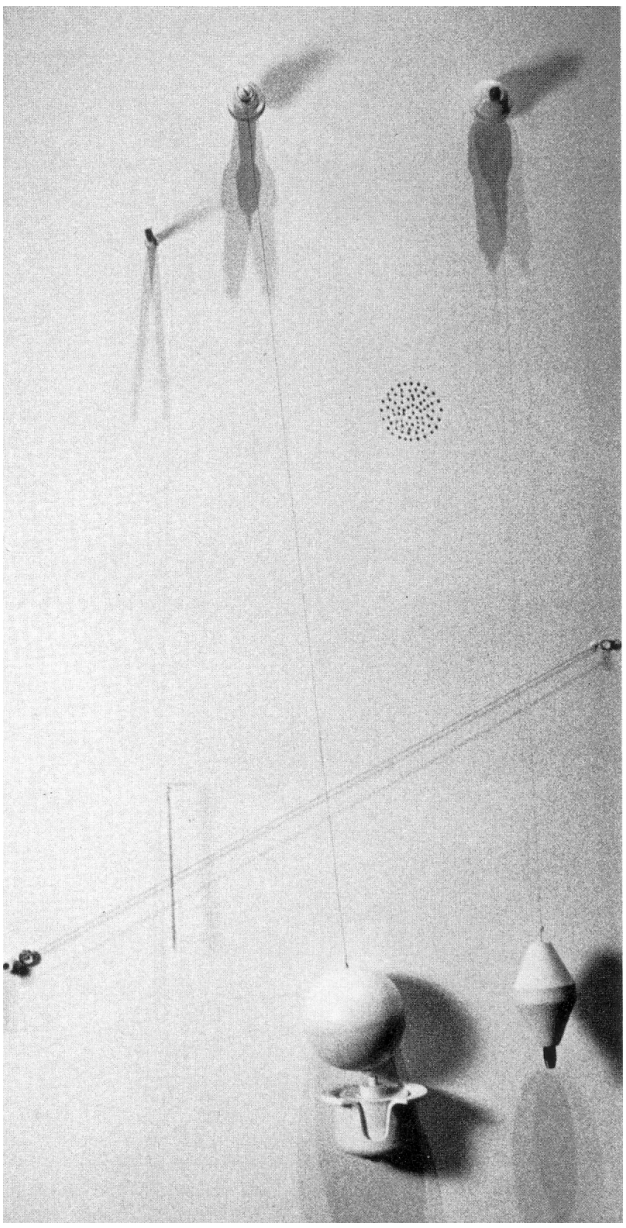


Figure 4.28. Takis, *Electromagnetic Musical Sculpture (Musical Light Sculpture)*, 1965.

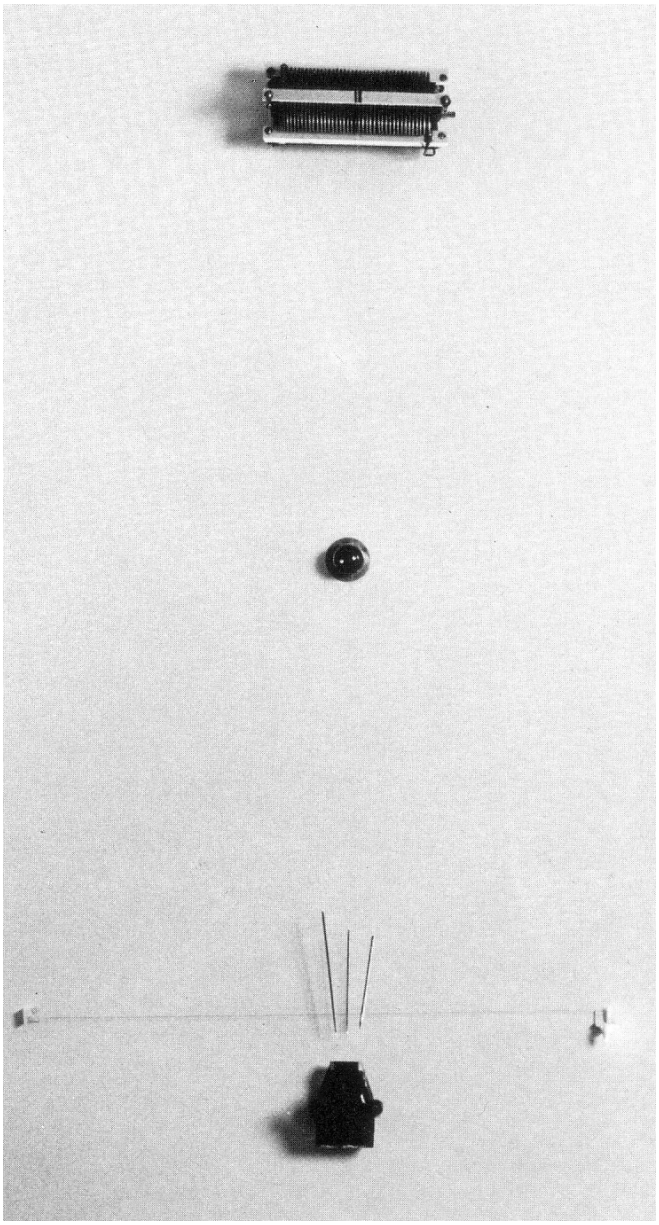
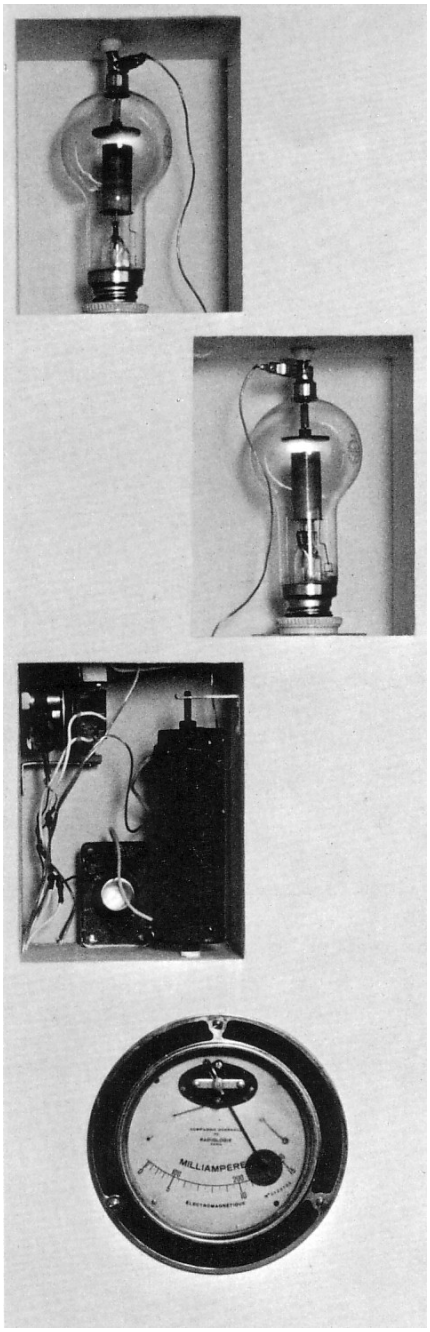


Figure 4.29. Takis, *Purple Dial (The Purple Subway Ride)*, 1966.



Appendix A. *Die Reihe* essay list
All German volumes published by Universal Edition, Vienna, Austria. All English volumes published by Theodore Presser and Company, Bryn Mawr, Pennsylvania.

***Die Reihe* 1: Electronic Music (1955 German edition / 1958 English edition)** [1]
Herbert Eimert, "What is electronic music?"
H.H. Stuckenschmidt, "The Third Stage"
Ernst Krenek, "A glance over the shoulders of the young"
Giselher Klebe, "First practical work"
Pierre Boulez, "'At the end of fruitful land …'"
Henri Pousseur, "Formal elements in a new compositional material"
Karel Goeyvaerts, "The sound material of electronic music"
Paul Gredinger, "Serial technique"
Karlheinz Stockhausen, "Actualia"
Gottfried Michael Koenig, "Studio technique"
Werner Meyer-Eppler, "Statistic and psychologic problems of sound"

***Die Reihe* 2: Anton Webern (1955 / 1958)**
Biographical Contents
Igor Stravinsky, "Foreword"
Friedrich Wildgans, "Biographical Table" (trans. Leo Black)
_____, "Index of Works" (trans. Leo Black)
Hildegard Jone, "A Cantata" (trans. Eric Smith)
Arnold Schönberg, "Foreword to Webern's *Six Bagatelles*, Op. 6" (trans. Eric Smith)
Anton Webern, "Homage to Arnold Schönberg" (trans. Eric Smith)
_____, "Webern as a Conductor" (trans. Eric Smith)
Ernst Krenek, "The Same Stone Which The Builders Refused Is Become The Headstone Of The Corner" (trans. Eric Smith)
_____, "From the Correspondence" (trans. Eric Smith)
_____, "The UE Reader" (trans. Eric Smith)
Anton Webern, "Choralis Constantius" (trans. Leo Black)
Analytical Contents
Herbert Eimert, "A Change of Focus" (trans. Leo Black)
Karlheinz Stockhausen, "For the 15th of September, 1955" (trans. Leo Black)
Pierre Boulez, "The Threshold" (trans. Leo Black)
Heinz-Klaus Metzger, "Webern and Schönberg" (trans. Leo Black)
Leopold Spinner, "Analysis of a Period" (trans. Leo Black)
Henri Pousseur, "Anton Webern's Organic Chromaticism" (trans. Leo Black)
Christian Wolff, "Movement"
Karlheinz Stockhausen, "Structure and Experiential Time" (trans. Leo Black)
Heinz-Klaus Metzger, "Analysis of the *Sacred Song*, Op. 15, No. 4" (trans. Leo Black)
Armin Klammer, "Webern's *Piano Variations*, Op. 27, 3rd Movement" (trans. Leo Black)
Herbert Eimert, "Interval Proportions" (trans. Leo Black)

[1] All essays translated to English by Hans G. Helms. All titles are in his original punctuation.

***Die Reihe* 3: Musical Craftsmanship (1957 / 1959)**
Herbert Eimert, "The Composer's Freedom of Choice" (trans. Leo Black)
Karlheinz Stockhausen, " … how time passes …" (trans. Cornelius Cardew)
John Cage, "To Describe the Process of Composition used in 'Music for Piano 21 – 52'"
Henri Pousseur, "Outline of a Method" (trans. Leo Black)
_____ 1. Introduction
_____ 2. *Quintet in Memory of Webern*
_____ a. Problems and Solutions
_____ b. Notation
_____ c. New Problems
_____ 3. *Impromptu*
_____ a. Problems and Solutions
_____ b. Notation
_____ 4. *Variations I*
_____ 5. *Variations II*

Die Reihe 4: Young Composers (1958 / 1960)[2]
Wolf-Eberhard von Lewinski, "Young Composers"
Udo Unger, "Luigi Nono"
Gottfried Michael Koenig, "Henri Pousseur"
Rudolph Stephan, "Hans Werner Henze"
György Ligeti, "Pierre Boulez"
Heinz-Klaus Metzger, "Intermezzo I (Just Who is Growing Old?)
_____, "Intermezzo II"
Gottfried Michael Koenig, "Bo Nilsson"
Wolf-Eberhard von Lewinski, "Giselher Klebe"
Piero Santi, "Luciano Berio"
Reinhold Schubert, "Bernd Alois Zimmermann"
Giacomo Manzoni, "Bruno Maderna"
Dieter Schnebel, "Karlheinz Stockhausen"

***Die Reihe* 5: Reports and Analyses (1959 / 1961)**
Herbert Eimert, "Debussy's 'Jeux'" (trans. Leo Black)
Heinz-Klaus Metzger, "Abortive Concepts in the Theory and Criticism of Music" (trans. Leo Black)
Gottfried Michael Koenig, "Studium im Studio" (trans. Leo Black)
Mauricio Kagel, "Tone, Clusters, Attack, Transitions" (trans. Leo Black)
György Ligeti, "Some Remarks on Boulez'[s] 3rd Piano Sonata" (trans. Leo Black)
Karlheinz Stockhausen, "Two Lectures" (trans. Ruth Koenig)
_____ I. Electronic and Instrumental Music
_____ II. Music in Space
Hans G. Helms, "John Cage's Lecture 'Indeterminacy'" (trans. Leo Black)
John Cage, "Lecture [Indeterminacy]"

[2] All essays translated to English by Leo Black.

***Die Reihe* 6: Speech and Music (1960 / 1964)**
Hans Rudolf Zeller, "Mallarmé and Serialist Thought" (trans. Margaret Shenfield)
Dieter Schnebel, "Brouillards, Tendencies in Debussy" (trans. Margaret Shenfield)
Karlheinz Stockhausen, "Music and Speech" (trans. Ruth Koenig)
Nocilas Ruwet, "Contradictions within the Serial Language" (trans. Margaret Shenfield)
Henri Pousseur, "Music, Form and Practice (an attempt to reconcile some contradictions) (trans. Margaret Shenfield)

***Die Reihe* 7: Form – Space (1960 / 1965)**[3]
György Ligeti, "Metamorphoses of Musical Form"
Ursula Burghardt-Kagel, "Amancio Williams' Space Theatre"
Christian Wolff, "On Form"
Mauricio Kagel, "Translation – Rotation"
John Whitney, "Moving Pictures and Electronic Music"
Rainer Fleischhauer and Jörn Janssen, "Project for 200,000 Inhabitants"
Jörn Janssen, "Initial Project. Designed for Gottfried Michael Koenig"

***Die Reihe* 8: Retrospective (1962 / 1968)**
Herbert Eimert, "Werner Meyer-Eppler" (trans. Ruth Koenig)
Werner Meyer-Eppler, "Musical communication as a problem of information theory"
Helmut Kirchmeyer, "On the Historical Constitution of a Rationalistic Music" (trans. Cornelius Cardew)
Walter Schulze-Andresen, "The Three-dimensional music stave" (trans. Cornelius Cardew)
Walter O'Connell, "Tone Spaces"
Adriaan D. Fokker, "Wherefore, and Why?"
Gottfried Michael Koenig, "Commentary" (trans. Ruth Koening)

[3] All essays translated to English by Cornelius Cardew, except for Wolff's "On Form," which was published in English in the German edition.

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